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Vol.6 No.1
September-October 1982

KANSAS BUSINESS REVIEW

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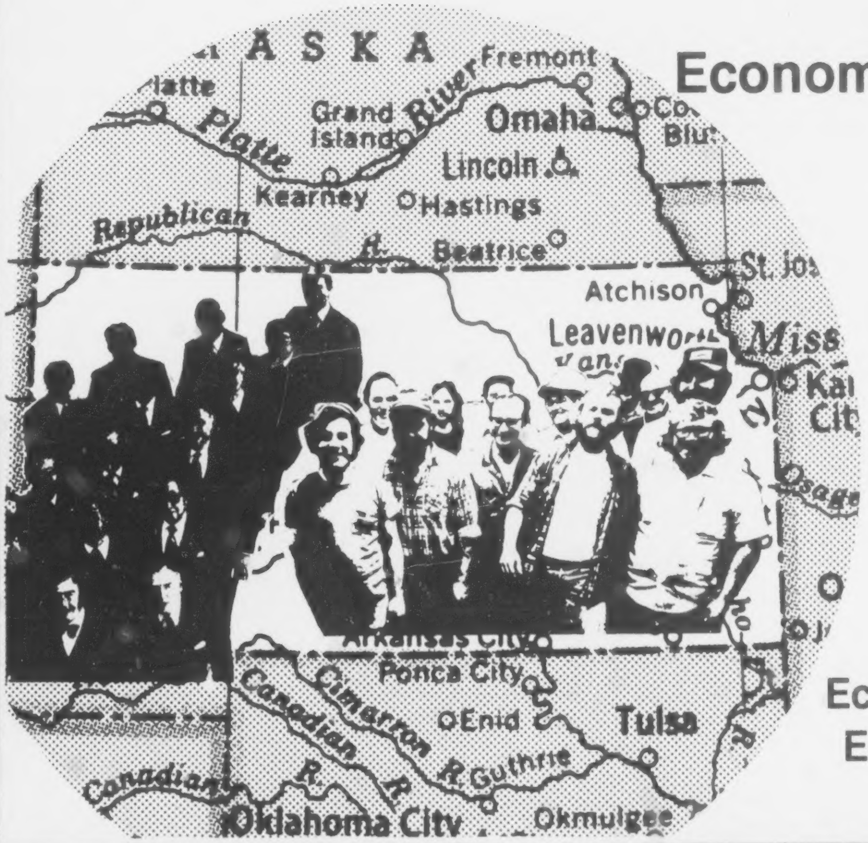
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Economic Conditions
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Institute for Economic and Business Research, The University of Kansas

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Kansas Business Review (KBR) is published five times a year. KBR is published by the Institute for Economic and Business Research, 319 Raymond Nichols Hall, The University of Kansas, Lawrence, Kansas 66045. It is designed by the Division of Publications, Office of University Relations.

Manuscripts for publication in *Kansas Business Review* are solicited from readers and should be sent to the editors for consideration.

Opinions expressed in the articles are those of the author(s) and do not necessarily reflect those of The University of Kansas.

Carl Nordstrom Steps Down from KACI

Recently, Carl Nordstrom retired as Executive Vice President of the Kansas Association of Commerce and Industry. One of the many responsibilities that came with Carl's position was to serve as a member of the Advisory Board for the Institute for Economic and Business Research (IEBR). The Institute's staff cannot help but note Carl's retirement with keen regret for Carl provided invaluable guidance to the Institute since its inception in 1976. Perhaps more than any other member of the Board, Carl was responsible for steering IEBR on a productive course of service to the state and its citizens. Of course, many Kansans are aware of—and benefited from—Carl's commitment to economic development in the state, and his leadership will be sorely missed by all those who had the privilege and pleasure of working with him.

We at the Institute know that we join countless Kansans in wishing Carl all the best in his retirement and in thanking him for a job well done.

The Migration of Workers to and from Kansas: 1965-1975

Bharati Bhattacharyya
Anthony Redwood
Morris Kleiner

Dr. Bhattacharyya is Research Economist for the Kansas Labor Market Information Project of the Institute for Economic and Business Research. Dr. Redwood is Director of the Institute for Economic and Business Research, Professor at the University of Kansas School of Business, and Director of the Kansas Labor Market Information Project. Dr. Kleiner, an Associate Professor in the School of Business, is Co-Director of the Labor Market Information Project.

Kansas has experienced chronic net outmigration each decade of this century. Most recently, the net outmigration of the state's total population was 130,000 (5.9 percent) for 1960-1970 and, for 1970-1980, 31,200 (1.3 percent). As well, Kansas was one of the slowest growing states in population during the last decade: Kansas' population grew only 5.1 percent from 1970-1980; the national figure was 11.9 percent. This situation has had serious consequences for the state economy, and a better understanding of it is necessary to devise counteractive policies.

Perhaps the situation's most evident effects are on the composition and behavior of the Kansas labor market when workers migrate into or away from the state. This article examines migration patterns of Kansas workers in the context of two major labor market problems: (1) the state's inadequate employment growth and (2) the shortage of skilled workers. Although limitations in the data do not allow for firm conclusions at this time—or for the delineation of the complex relationship between migration and the stated problems—data analysis does afford some insights into the dynamics of influence. Specifically, the data drawn from the Social Security Administration's Continuous Work History Sample for the periods 1965-70 and 1970-75 strongly suggest (1) that Kansas workers are outmigrating in response to the state's inadequate rate of employment growth and (2) that a high percentage of those outmigrants are skilled workers.

Following a brief description of the Continuous Work History Sample, this study presents and analyzes the available data with specific focus on interstate migration. A concluding section briefly discusses some implications for public policy.

The Continuous Work History Sample

The Social Security Administration's (SSA) Continuous Work History Sample (CWHS) is a detailed source of information on work force characteristics for state and substate areas, especially for intercensal years. The CWHS is a sample of workers' earnings records from employers' reports to the SSA and is based on specific digits in workers' social security numbers (scrambled to conceal the workers' identities). Because the same social security numbers are always included, the data files for successive periods can be linked to provide trend analyses classified by sex, race, year of birth, state, county, and industry of employment as well as by an estimate of wages earned from each SSA-covered job.

One of the virtues of CWHS data is that the sample allows for estimates and analyses of interstate and intrastate labor force migration. CWHS data also provides information on labor force entrants and exits by demographic groups and by industry and is especially useful for comparing nonmigrants with migrants and for determining the pull and push factors behind labor migration. Above all, these data are free of the memory biases often found in survey responses by individuals.

Analysis

The CWHS data for 1965-70 and 1970-75 show that the size of the Kansas covered work force was 555,400 and 653,000 (Table 1) at the start of each period, respectively (1975-80 data should be available later this year). During 1965-70, the net outmigration of Kansas workers was 3.3 percent (18,000). During 1970-75, more wage earners came to Kansas, and, thus, the net immigration figure was 0.4 percent (2,600). 1980 *Census* data suggest, however, that this immigration trend of workers during the decade's first half dissipated by the end of the 1970s.

The interstate migration data for both periods reveals that Kansas lost workers primarily to bordering states (as would be expected), Sunbelt states, and highly populous states (Tables 2 and 3). From 1965-70, 26,400 workers went from Kansas to Missouri, comprising 30.4 percent of the total outmigrants. Nearly 16 percent of the total outmigrants left Kansas for either Oklahoma (7.2 percent), Colorado (4.9 percent), or Nebraska (3.6 percent). From 1970-75, the bordering states again figured prominently as destinations for Kansas outmigrants: once more Missouri ranked first but with a decline in the percentage of total outmigrants (24.9 percent), whereas the percentage of workers migrating to Oklahoma and Colorado increased rather sharply (11.1 and 6.1, respectively).

Outmigrants to Texas and California also contributed significantly to the total outmigrant figure in each period, reflecting the "boom" status that these states enjoyed, particularly from 1970-75. In this second period, Arkansas, Florida, and New Mexico appear among the first fourteen states contributing to the Kansas outmigration total; along with Arizona, which moved from twelfth (1965-70) to ninth (1970-75) in its ranking as an outmigrant destination, these Sunbelt states received 5,700 Kansas workers (6.8 percent). Upon adding the contribution of Texas and California, the total number increases to 21,300, the percentage to 25.6 percent. Other than their rough nominal affinity as Sunbelt states, these states also had in common sharply growing rates of employment. As did Oklahoma, and, if its contribution is included, the seven states' total figure is 30,500 outmigrants received, comprising more than one third—36.7 percent—of all Kansas outmigrants.

Illinois, New York, Pennsylvania, and Ohio—all highly populous, highly industrialized states—just about complete the pic-

Table 1

Kansas
Migration Summary of Covered Workforce
Based on Social Security Continuous Work History Sample (1%)
First Quarter of 1965-70-75*

	1965-1970					1970-1975				
	Thousands Workers	% Total	1965[1] Wages	1970[2] Wages	% Change Wages	Thousands Workers	% Total	1970[1] Wages	1975[2] Wages	% Change Wages
Initial Covered Work Force	565.4	100.0	4,066			653.0	100.0	5,449		
Immigrants	68.2	12.1	4,779	7,340	53.6	85.7	13.1	6,126	9,727	58.8
Outmigrants	86.8	15.4	4,349	7,509	72.6	83.1	12.7	5,908	9,534	61.4
Net Migration	-18.6	-3.3				2.6	.4			
Laborers Moved Within Industry in the State	72.6	12.8	3,150	5,542	75.9	81.0	12.4	3,944	7,257	84.0
Entered Covered Work Force	249.3	44.1		3,297		245.2	37.5		4,650	
Left Covered Work Force	147.0	26.0	3,005			203.1	31.1	4,183		
Final Covered Work Force	653.0	115.5		5,449		686.3	105.1		7,686	

* It includes all workers and all industries.

[1] 1965 (1970) wage of inmigrants is the average wage of those who were outside Kansas in 1965 (1970) but moved to Kansas during 1965-70 (1970-75).
1965 (1970) wage of outmigrants is the average wage of those who were in Kansas in 1965 (1970) but moved out of Kansas during 1965-70 (1970-75).

[2] 1970 (1975) wage of outmigrants is the average wage of those who were in Kansas in 1965 (1970) but moved out of Kansas during 1965-70 (1970-75).
1970 (1975) wage of inmigrants is the average wage of those who were outside Kansas in 1965 (1970) but in Kansas in 1970 (1975).

Source: Continuous Work History Sample.

Table 2

Ranking of States by Magnitude of Migration of Covered Workforce and Information of Their Wages: 1965-70

		Inmigrants						Outmigrants			
Rank	State	Thousands Workers	% Total	1965[1] Wages	1970[2] Wages	Rank	State	Thousands Workers	% Total	1965[1] Wages	1970[2] Wages
1.	Missouri*	23.5	34.5	4585	7070	1.	Missouri	26.4	30.4	4407	7793
2.	Oklahoma	6.5	9.5	3974	6580	2.	Texas	8.4	9.7	4241	7345
3.	California*	6.0	8.8	5850	8088	3.	Oklahoma**	7.2	8.3	4741	7503
4.	Texas*	5.2	7.6	5725	8722	4.	California	5.8	6.7	3328	6182
5.	Colorado	3.8	4.8	3177	4648	5.	Colorado**	4.9	5.6	3996	5933
6.	Illinois*	2.7	4.0	6166	9047	6.	Nebraska	3.6	4.1	3149	5634
7.	Nebraska*	2.5	3.7	3597	6671	7.	Washington	2.8	3.2	5858	9666
8.	New York	1.9	2.8	3195	5805	7.	Illinois	2.8	3.2	5716	10179
9.	Iowa	1.8	2.6	3701	7185	8.	Minnesota	1.9	2.2	3967	8087
10.	Michigan*	1.3	1.9	6674	11541	9.	Iowa**	1.7	2.0	4192	7587
11.	Indiana	1.2	1.8	5010	9897	9.	Michigan	1.7	2.0	4713	7669
12.	Ohio	1.1	1.6	4037	8131	10.	New York**	1.6	1.8	5365	9483
13.	Arizona*	1.0	1.5	4783	5836	11.	Pennsylvania**	1.5	1.7	5561	9886
14.	Minnesota*	.9	1.3	6487	8446	12.	Ohio**	1.4	1.6	5447	6884
14.	Georgia	.9	1.3	6600	6714	12.	Arizona	1.4	1.6	3918	6289

[1] 1965 wages of inmigrant (outmigrant) are the wages of those who were outside (inside) Kansas in 1965 and moved to (moved out of) Kansas between 1965-70.

[2] 1970 wages of inmigrants (outmigrants) are the wages of those people who were outside (inside) Kansas in 1965 but in (out of) Kansas in 1970.

* Denotes that for these states the 1965 wage of inmigrants is higher than the 1965 wage of outmigrants.

** Denotes that, for outmigration to these states, the Kansas (or origin) wage was higher than the wage in the destination states.

Source: Continuous Work History Sample

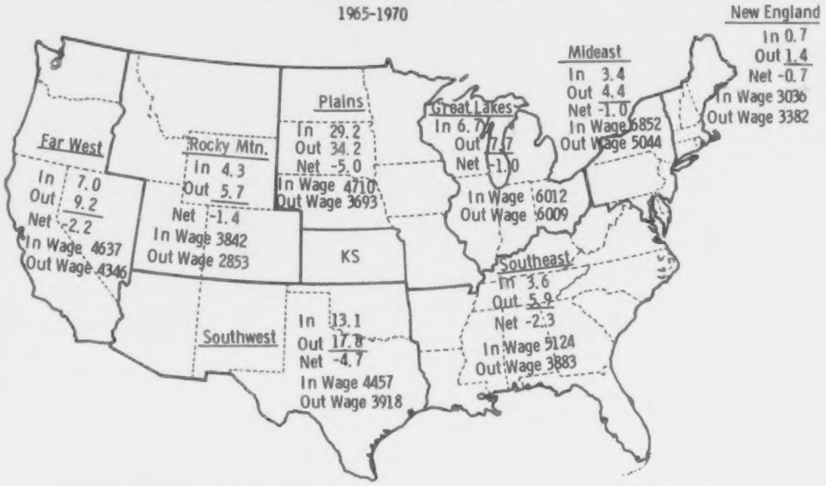
ture of the interstate dispersion of Kansas workers; not surprisingly so, for these states, by virtue of their size, will always act both as migratory magnets and points of departure.

Those states bordering Kansas also contributed significantly to the Kansas inmigration total. For both periods, Missouri and Oklahoma ranked first and second in their contribution of inmigrants. From the first period (1965-70) to the second (1970-75), both states registered an increase in the number of covered workers coming to Kansas, although their percentage of total inmigrants declined. Inmigration from Colorado declined over the two periods, whereas more workers came from Nebraska during 1970-75 than during the earlier 5-year period—a pattern that confirms the expectations that Kansas *vis-a-vis* Colorado would appear less attractive as a destination point and more attractive *vis-a-vis* Nebraska. Taken together, the four bordering states accounted for 52.5 percent and 49.4 percent of all workers coming to Kansas in 1965-70 and 1970-75, respectively. The decline in percent was due to the simple fact that, in the second period, Kansas experienced net inmigration; thus, a single state's or collective states' contribution might register less emphatically despite the increase in raw numbers (as was the case with Missouri and Oklahoma and with the four states collectively: 35,800, 1965-70; 42,300, 1970-75).

Inmigration from the contributing Sunbelt states declined from the one period to the next, with the exception of California whose contributions remained the same (6,000 workers); as a highly populous state, California, like New York, will serve simultaneously as a point of origin and destination for migrants.

The workers who outmigrated may be more skilled than the laborers who stayed in Kansas.

Map I
Information on Migration of Covered Workforce and Their Wages
Eight National Regions and Kansas*
1965-1970


New England
In 0.7
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Net -0.7
In Wage 3036
Out Wage 3382
Mideast
In 3.4
Out 4.4
Net -1.0
In Wage 6852
Out Wage 5044
Great Lakes
In 6.7
Out 7.7
Net -1.0
In Wage 6012
Out Wage 6009
Plains
In 29.2
Out 34.2
Net -5.0
In Wage 4710
Out Wage 3693
Far West
In 7.0
Out 9.2
Net -2.2
In Wage 4637
Out Wage 4346
Rocky Mtn.
In 4.3
Out 5.7
Net -1.4
In Wage 3842
Out Wage 2853
KS
Southwest
In 13.1
Out 17.8
Net -4.7
In Wage 4457
Out Wage 3918
Southeast
In 3.6
Out 5.9
Net -2.3
In Wage 5124
Out Wage 3883

* Migration Figures are Given in Thousands
The Term 'In' Implies Immigration from a Region and the Term 'Out' Implies Immigration to a Region.
Source; CWHS

Table 3
Ranking of States by Magnitude of Migration of Covered Workforce and Information of Their Wages: 1970-75

	Inmigrants						Outmigrants				
Rank	State	Thousands Workers	% Total	1970[1] Wages	1975[2] Wages	Rank	State	Thousands Workers	% Total	1970[1] Wages	1975[2] Wages
1.	Missouri*	29.2	34.1	6239	9171	1.	Missouri	20.7	24.9	6171	9437
2.	Oklahoma	7.2	8.4	4693	9653	2.	Texas**	9.8	11.8	6527	10356
3.	California*	6.0	7.0	6479	9251	3.	Oklahoma**	9.2	11.1	6143	8505
4.	Illinois*	4.9	5.7	7462	11420	4.	California	5.8	7.0	6152	10281
5.	Texas	4.4	5.1	5940	9704	5.	Colorado	5.1	6.1	4460	7927
6.	Iowa*	3.2	3.7	6159	11374	6.	Illinois	3.7	4.5	5903	11401
7.	Colorado*	3.0	3.5	5649	8693	7.	Nebraska* *	2.5	3.0	5907	8727
8.	Nebraska	2.9	3.4	5570	8334	8.	Iowa	2.3	2.8	5827	8000
9.	Georgia*	2.1	2.5	7605	12330	9.	Arizona* *	1.6	1.9	4118	11041
10.	New York*	1.8	2.1	7208	9875	9.	Arkansas	1.6	1.9	4928	6949
11.	Indiana	1.7	2.0	4590	7588	10.	New York	1.5	1.8	4737	11362
12.	Wisconsin*	1.6	1.9	8181	13906	11.	Florida* *	1.4	1.7	5179	12509
13.	Minnesota	1.5	1.8	6039	10369	12.	Pennsylvania* *	1.3	1.6	7082	10818
14.	Ohio	1.3	1.5	5609	10409	13.	Ohio* *	1.2	1.4	5833	8325
15.	Arkansas*	1.2	1.4	6103	11418	14.	New Mexico* *	1.1	1.3	6090	6671

[1] 1970 wages of inmigrant (outmigrant) are the wages of those people who were outside (inside) Kansas in 1970 and moved to (moved out of) Kansas between 1970-75.

[2] 1975 wages of inmigrants (outmigrants) are the wages of those people who were outside (inside) Kansas in 1970 but in (out of) Kansas in 1970.

* Denotes that for these states the 1970 wage of inmigrants was higher than the 1970 wage of outmigrants.

** Denotes that, for outmigration to those states, the Kansas (or origin) wage was higher than the wage in the destination states.

Source: Continuous Work History Sample

Table 4
Ranking of Regions[1] by Magnitude of Migration of Covered Workforce and Information on Their Wages: 1965-70

		Inmigrants						Outmigrants			
Rank	Region	Thousands Workers	% Total	1965[2] Wages	1970[3] Wages	Rank	Region	Thousands Workers	% Total	1965[2] Wages	1970[3] Wages
1.	Plains	29.2	52.8	4710	7181	1.	Plains	34.2	39.3	3693	7035
2.	Southwest	13.1	19.2	4457	6723	2.	Southwest	17.8	20.3	3918	6761
3.	Far West	7.0	10.3	4637	6055	3.	Far West	9.2	10.5	4346	7613
4.	Great Lakes	6.7	9.9	6012	9941	4.	Great Lakes	7.7	8.9	6009	9356
5.	Rocky Mtn.	4.3	6.2	3842	4812	5.	Southeast	5.9	6.6	3883	6956
6.	Southeast	3.6	5.0	5124	7227	6.	Rocky Mtn.	5.7	6.4	2853	3092
7.	Mideast	3.4	4.9	6852	9892	7.	Mideast	4.4	5.0	5044	9291
8.	New England*	.7	1.0	3036	5342	8.	New England**	1.4	1.5	3382	7019

[1] See Maps I and II.

[2, 3] 1965 and 1970 wages are defined in the same way as they are defined in Tables 2 and 3. The only difference is that a particular region's wage is the average of the wages of all the states comprising that region.

* and ** As in Tables 1 and 2.

Source: Continuous Work History Sample

Table 5
Ranking of Regions by Magnitude of Migration of Covered Workforce and Information on Their Wages: 1970-75

		Inmigrants						Outmigrants			
Rank	Region	Thousands Workers	% Total	1970[1] Wages	1975[2] Wages	Rank	Region	Thousands Workers	% Total	1970[1] Wages	1975[2] Wages
1.	Plains*	37.1	43.1	6168	7759	1.	Plains**	26.0	31.3	8358	13972
2.	Southwest	13.9	15.0	6611	10411	2.	Southwest	21.7	26.1	5729	9143
3.	Great Lakes	10.5	12.3	6471	10234	3.	Southeast	9.1	10.6	4816	8663
4.	Southeast	8.0	9.5	5273	8977	4.	Great Lakes	7.7	9.3	6045	10944
5.	Far West	6.7	7.9	6509	10234	5.	Far West	7.0	8.4	5034	10214
6.	Rocky Mtn.*	3.8	4.4	4816	8045	6.	Rocky Mtn.**	6.3	7.5	5515	8694
7.	Mideast	3.7	4.3	6496	10006	7.	Mideast	3.4	4.1	5151	10074
8.	New England*	.8	.9	5940	15377	8.	New England**	.9	1.1	7264	12038

[1, 2] 1970 and 1975 wages are defined in the same way as they are defined in Tables 2 and 3. The only difference is that a particular region's wage is the average of the wages of all the states comprising that region.

* and ** As in Tables 1 and 2.

Source: Continuous Work History Sample

The 1970-75 decline in workers coming to Kansas from these states can be explained, at least in part, by the growing economy of the Sunbelt region.

The net Kansas inmigration for 1970-75 is due partially to the increase in inmigrants coming to Kansas from the highly populated states to the east. Significantly, most of these states (New York, Pennsylvania, Ohio, and Illinois) did not experience particularly strong growth in employment during the 5-year period.

Comparison of the data from the two tables indicates that newcomers to Kansas during 1970-75 came from a broader spectrum of states than in the earlier period. In fact, during 1970-75, only 50.3 percent of the total Kansas inmigration figure was contributed by the first five states (Missouri, 34.1 percent, Oklahoma, 8.4 percent, California, 7.0 percent, Illinois, 5.7 percent, and Texas, 5.1 percent), compared to 65.2 percent in 1965-70. In the case of outmigration, however, the contribution of the first five states together remained almost the same in 1970-75—60.9 percent (Missouri, 24.9 percent, Texas, 11.8 percent, Oklahoma, 11.1 percent, California, 7.0 percent, and Colorado, 6.1 percent).

Tables 4 and 5 (and Maps I and II) provide information on migration and average wage for eight regions for both periods (these regional distinctions follow BEA's regional division of states). As expected, those regions proximate to Kansas had the greatest influence on the state's migration pattern. These data indicate that the Plains region contributed 52.8 percent of the total Kansas inmigration (29,200 workers) and 39.3 percent of the state's total outmigration (34,200 workers) during 1965-70. The corresponding figures for the Southwest region are 19.2 percent (13,100 workers) and 20.3 percent (17,800 workers).

During 1970-75, the Plains contributed 43.1 percent of the total inmigration (37,100 workers) and 31.3 percent of the total outmigration (26,000 workers). The growing Southwest region's contribution to Kansas inmigration declined to 15 percent (13,900 workers); its contribution to outmigration rose to 26.1 percent (21,700 workers). The Plains and Southwest regions maintained their ranks both in 1965-70 and 1970-75.

Table 6 summarizes net migration patterns between Kansas and the regions during the two study periods. During 1965-70, a net outmigration period for Kansas, there was a net outflow to each of the eight regions. During 1970-75, a net inmigration period for Kansas, all of the regions contributed to the total outmigration figure, except the Plains, Mideast, and Great Lakes regions. In essence, regardless of whether Kansas experienced net-in or net-out migration, the state lost workers to the Southwest region, in particular, as well as to the Rocky Mountain and Southeast regions.

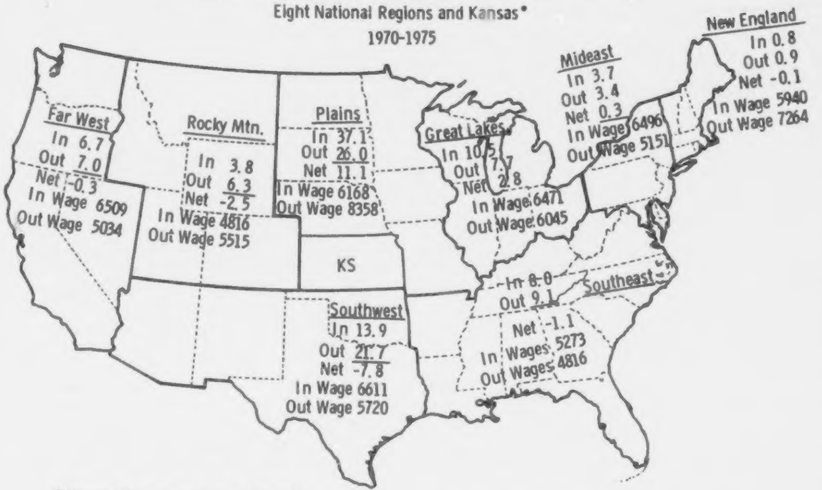
In analyzing the movements of workers into and out from Kansas, it is useful to look at some of those factors responsible for the evident patterns. One unique feature of CWHS data is that it allows one to analyze the relation between migrants' movements and their average income. Although such an analysis does not identify all the factors behind migration, it does suggest some of the migrants' concerns.

Table 7 shows that the absolute average wage for the initial year of each period (i.e., for 1965-70 and for 1970-75) was higher for inmigrants than for outmigrants (e.g., inmigrants' wage in 1965 was $4,775 while that for outmigrants' was $4,349; for 1970-75, the corresponding figures were $6,126 and $5,908).

This information suggests that higher wages are a greater inducement to those leaving Kansas than to those choosing to enter. As shown in Table 7, during 1965-70, the change in outmigrants' wage was 72.9 percent while that for inmigrants was only 53.9 percent. For the period 1970-75, the corresponding figures were 61.9 percent and 58.8 percent.

It is significant that the gap between the percentage change in both the inmigrants' wage and in the outmigrants' wage was not as high for 1970-75 (1.6 percent) as it was for 1965-70 (19.3 percent). If the hypothesis that income gain is a positive factor for migrants is accepted, then the narrowing wage differential seen here provides a reasonable explanation for the high net outmigration during 1965-70 and for the higher inmigration during 1970-75. Although it is not possible to ascertain to what exact extent net outmigration was influenced by this salary pattern, it is possible to conclude that, at least for 1965-70, Kansas

Map II
Information on Migration and of Covered Workforce and their Wages
Eight National Regions and Kansas*
1970-1975


Far West
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Rocky Mtn.
In 3.8
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Out Wage 5515
Plains
In 37.1
Out 26.0
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Great Lakes
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Mideast
In 3.7
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In Wage 6496
Out Wage 5151
New England
In 0.8
Out 0.9
Net -0.1
In Wage 5940
Out Wage 7264
Southwest
In 13.9
Out 21.7
Net -7.8
In Wage 6611
Out Wage 5720
Southeast
In 8.0
Out 9.1
Net -1.1
In Wages 5273
Out Wages 4816

*Migration Figures are Given in Thousands
The Term 'In' Implies Immigration from a Region and the Term 'Out' Implies Immigration to a Region.
Source; CWHS

Table 6
Net Migration of Covered Workforce: Kansas and Eight Regions of the United States

1965-70 Migration		1970-75 Migration	
Region	Thousand Workers	Region	Thousand Workers
Plains	- 5.0	Plains	11.1
Southwest	- 4.7	Southwest	- 7.8
Far West	- 2.2	Great Lakes	2.8
Great Lakes	- 1.0	Southeast	- 1.1
Rocky Mtn.	- 1.4	Far West	- .3
Southeast	- 2.3	Rocky Mtn.	- 2.5
Mideast	- 1.0	Mideast	.3
New England	- .7	New England	- .1

Source: Continuous Work History Sample

Table 7
Average Wage of Migrant Covered Workforce

	1965–1970			1970–1975		
	1965 Wages	1970 Wages	%Change Wages	1970 Wages	1975 Wages	%Change Wages
Inmigrants	4779	7340	53.6	6126	8727	58.8
Outmigrants	4349	7509	72.9	5908	9534	61.4

Source: Continuous Work History Sample

Table 8
Comparison Between Workers Who Moved Outside Kansas and Who Moved (Interindustry) Within Kansas

	1965-70					1970-75				
	Thousands of workers	% Total	1965 Wage	1970 Wage	%Change Wages	Thousands of workers	% Total	1970 Wage	1975 Wage	%Change Wages
Workers Moved Within Industry in the State	72.6	12.8	3150	5542	75.9	81.0	12.4	3944	7257	84
Outmigrants	86.8	15.4	4349	7509	72.6	83.1	12.7	5908	9534	61.4

was not perceived as a particularly attractive economic environment by workers.

Further wage analysis of interstate migration can be developed by using Tables 2 and 3. Because migration usually is explained by the income or wage differential hypothesis (i.e., migrants are usually attracted by the higher wage or income of the destination region), it is surprising to see that for some of the interstate and regional migration the hypothesis did not hold. For example, comparing the wages in Table 2 of those who migrated shows that in the case of inmigration for Missouri, Oklahoma, Colorado, New York, Iowa, and Ohio, the destination (Kansas) wage was lower than the origin wage. Similarly for outmigrants: for Colorado, Ohio, Iowa, New York, and Pennsylvania, the origin (Kansas) wage was higher than the wage in the destination areas. Table 3 also provides similar types of information.

CWHS data also provides information on the interindustry movement of workers as well. These data for Kansas are summarized in Table 8. As can be seen, the percentage of the work force moving between industries was larger in 1965-70 than in 1970-75. However, it is more interesting to note that the 1965 wages of those who migrated outside Kansas were higher than the 1965 wages of those who did not move out of state but moved from one industry to another. Table 8 shows that, during 1965-70, the 1965 wage of the interindustry group was $3150 while that of outmigrants was $4349. Also, the 1970 percentage change in wages for outmigrants (72.6 percent) was less than the percentage change in wages of those who moved only within the state (75.9 percent). The same analysis also applies for the period 1970-75.

These facts indicate that the workers who outmigrated may be more skilled than the laborers who stayed in Kansas, thereby supporting the view that considers the shortage of skilled labor and the migration of educated or trained young workers as two of the most serious problems in the state's labor market.

In conclusion, it can be said that for the period 1965-70 Kansas workers were attracted by the out-of-Kansas labor market. The available wage information also suggests limited economic prospects for workers in Kansas and also emphasizes the problem of a shortage of skilled laborers.

However, it should be mentioned that the number of net entrants to the covered work force was higher than net migration (see Table 1). For example, for the period 1965-70, if the number of those who left the covered work force is subtracted from the number of those who entered the covered work force, then the size of net entrants to the work force was 102,300 workers, while the size of outmigration was 18,600 workers. For the period 1970-75, the net number of new entrants to the work force was 42,100 workers while the size of the net inmigration figure was 2,600 workers. The comparison is more meaningful for 1965-70 because the number of entrants to the covered work force was higher than the net outmigration figure. Therefore, the question arises as to whether the so-called mismatch between demand and supply in the Kansas labor market is only due to the migration factor, and the possibility arises that the problem needs to be looked at more intensively from other points of view. Clearly, one should be very cautious about drawing firm conclusions from this evidence. It is important to look at other data sources to check the pattern of migration behavior in Kansas. In particular, it has already been observed that 1975-80 experienced net outmigration; it will be interesting to see if the 1975-80 pattern parallels 1965-70's.

Higher wages are a greater inducement to those leaving Kansas than to those choosing to enter.

Public Policy Implications

These CWHS-generated data on the state's migration pattern have significant implications for Kansas economic and labor policy. For example, given that net outmigration is occurring to such states as Oklahoma and Colorado, the question arises as to what types of industries should be encouraged to develop or expand in Kansas to reverse the outflow. Further, to the extent that state policies influence the migration of skilled workers, the question should be asked as to how existing policies could be changed to discourage the outflow.

These points are particularly pertinent since, as late as 1978, the Kansas Department for Economic Development warned that the state is developing a tendency to attract low-wage firms. This admonition serves to synthesize several aspects of the complex dynamic relating migration and the labor market. On the one hand, Kansas' comparatively static rate of employment growth acts as a catalyst for the outmigration of skilled workers and, on the other hand, as a retardant to the inmigration of skilled workers. As a result, those inmigrating to Kansas can be characterized, in large part, as less-than-highly skilled, and the effect of inmigration only acts to perpetuate the *status quo*.

Another issue concerns the age composition of outmigrants. Specifically, given the very strong likelihood that Kansas experiences a net outflow of well-educated youth, the state becomes, in effect, a training center for out-of-state industries. It would seem that appropriate policies in response could include informational campaigns designed to alert firms to the highly skilled workers availabe in the state as well as to encourage the development of high-tech industries that would make use of this talent pool.

The Institute's Labor Market Information Project is funded by the State of Kansas through the Governor's Special Grant Component of the Comprehensive Employment and Training Act and is sponsored by the State Employment and Training Council and the Kansas Department of Human Resources. All views expressed are solely those of the authors.

Economic Theory and Policy: Some Continuing Debates

Robert A. McLean

Dr. McLean is an Assistant Professor of Business Administration in the University of Kansas School of Business.

Introduction

Today, more than at any time since the 1930s, there is widespread confusion regarding the effects of alternative economic policies on such measures as Gross National Product (GNP), interest rates, and the price level. In part, this confusion stems, as it did in the 1930s, from changes in the way economists view the workings of the economy.

This paper explores three of the points of confusion that are most often before the public. These are (1) the effect of changes in the money supply on interest rates, (2) the consequences of federal deficits, and (3) the role of savings in economic recovery. Rather than offering definitive statements as to truth and error, the goal of the paper is to delineate, with some care, the basic points of disagreement among economists and to distinguish genuine disagreement from genuine confusion.

Some Background on Macroeconomic Controversies

Until some time late in the 1960s, two schools of thought dominated macroeconomics—the study of aggregate economic relationships—and had done so since the Great Depression. On the one hand were the Keynesians, following, with revisions, the theory outlined by John Maynard Keynes in the *General Theory of Employment, Interest, and Money* (1936). They held that it was quite likely, in the absence of government intervention, that the economy would reach a stable equilibrium without using all of its available human and physical resources. To remedy the human suffering inherent in such a situation, Keynesians recommended (and continue to recommend) combinations of government spending and money stock expansion to stimulate the production of goods and services.

A critical linchpin in the Keynesian analysis was, and remains, the assumed failure of wages, prices, and interest rates to adjust completely to eliminate excess supplies of labor and capital. Further, Keynesians argue that, if wages and prices did begin to fall in times of a recession, businessmen would become pessimistic and reduce their purchases of capital (plant and equipment), no matter how low interest rates were. For Keynesians, then, government spending became a means of bolstering the level of aggregate demand, insuring that full employment would always be met.

On the other hand, monetarist economists (following a tradition that preceded Keynes) held that the level of real (inflation-adjusted) income was determined by the available stock of money. Thus, increases in government spending could have no effect on production. If total spending were to increase while the stock of money remained fixed, monetarists argued, interest rates would rise and private investment would fall. Government spending, then, completely (and only) "crowds out" private spending. As to whether or not involuntary unemployment could exist, monetarists were divided. Some believed the economy adjusted, at least in the long run, to eliminate any involuntary unemployment, whereas others accepted the essentially Keynesian notion of equilibrium at less than full employment. One does little violence to the Keynesian-monetarist debate, pre-1970, however, to say that the fundamental difference between the two schools of thought was over the effectiveness of fiscal policy (government spending and taxing) in altering national income. Keynesians believed fiscal policy to be effective, monetarists disagreed.

This debate is no longer the center of controversy in theoretical macroeconomics. The monetarists' "complete-crowding-out" position has been shown to be merely a special case of the more general Keynesian model. The extreme Keynesian "no-crowding-out" position has been determined (statistically) to be a condition existing in theory, but not in fact. The degree of crowding out has been shown to vary with the degree to which the demand for money responds to the interest rate, consistent with a compromise model in which *both* the money stock and public spending influence real income.

A New Challenge

Debates among macroeconomists are not, however, matters of the past. During the 1970s, a "new" monetarism developed (usually referred to as the rational expectations approach), posing another, more fundamental challenge to the Keynesian worldview.

The fundamental difference between the new monetarists and the Keynesians is that the rational expectations school begins from the microeconomic proposition that the economy does reach general equilibrium, that markets do adjust to eliminate any loss of potential output. Further, the essence of rational expectations theory is the assumption that those adjustments are quick and that they begin as soon as new information about economic policy becomes available. Observed unemployment is not, they claim, involuntary, but is, rather, rational (income maximizing) job-search behavior.

Perhaps the feature of the new monetarism which has caused the greatest interest among all economists, and which separates it most clearly from the old monetarism, is the assumption of rational expectations on the part of all economic agents. The assumption of rational expectations is that information is scarce and expensive to process. Therefore, all agents use all available information about the economy efficiently.

For example, consider the case of the unemployed individual engaging in a search for a job. He sets some "reservation wage" and ceases to search (accepts a job) when he receives an offer equal to or greater than that wage. His reservation wage is based on his perception of his opportunities, including the distribution of all possible wage offers. If the money supply is increased, the price level goes up (at least in the long run) so agents following rational expectations will base their actions on the assumption of price level increases. The job seeker's wage opportunities will increase (every wage offer will rise by the same percentage as the price level). Will the job seeker be "tricked" into accepting a job offer more quickly, thus reducing the level of unemployment? Not so, say the rational expectations theorists.

Because the job seeker forms his expectations rationally, he knows that increases in the money stock will increase the price level. He knows that the apparent increases in wage offers are due to increasing prices. Therefore, the job seeker is not tricked into accepting a job by increases in the nominal wage that are not true increases in the purchasing power that the wage carries. Thus, monetary policy cannot, the rational expectations school contends, be used to reduce unemployment.

Because the economy is always at (or rapidly approaching) its full potential, the rational expectations/monetarists claim, neither fiscal nor monetary policy can have any effect on real output. Rather, monetary policy is seen as having an effect on the price level (increasing the stock of money causes an equi-proportional increase in the price level) and on the rate of interest (lenders demand a given real rate of interest, and, as the rate of inflation rises, the nominal rate of interest must rise to preserve the equilibrium real rate of interest). Likewise, government deficit spending, so important to the achievement of full employment in the Keynesian approach, can only, for the rational expectations school, increase the price level, increase the rate of interest, and replace private investment with public spending (their argument is the same as the older monetarist argument described above).

For the rational expectations school, the upshot of all of this is that no government policy can have even temporary effects on unemployment or on real (price-adjusted) output. Thus, government should be a neutral agent in the economy, using the supply of money to ensure that the machine of the economy is well-oiled, but not try to alter the level of real economic activity (see Maddock and Carter, 1982).

Some Misunderstandings

When these distinctions among economists are clear, some misunderstandings and disagreements come into sharper focus; however, only a few of the many controversies in theory and policy can be dealt with here. For more extended discussions, see the list of references at the end of the article.

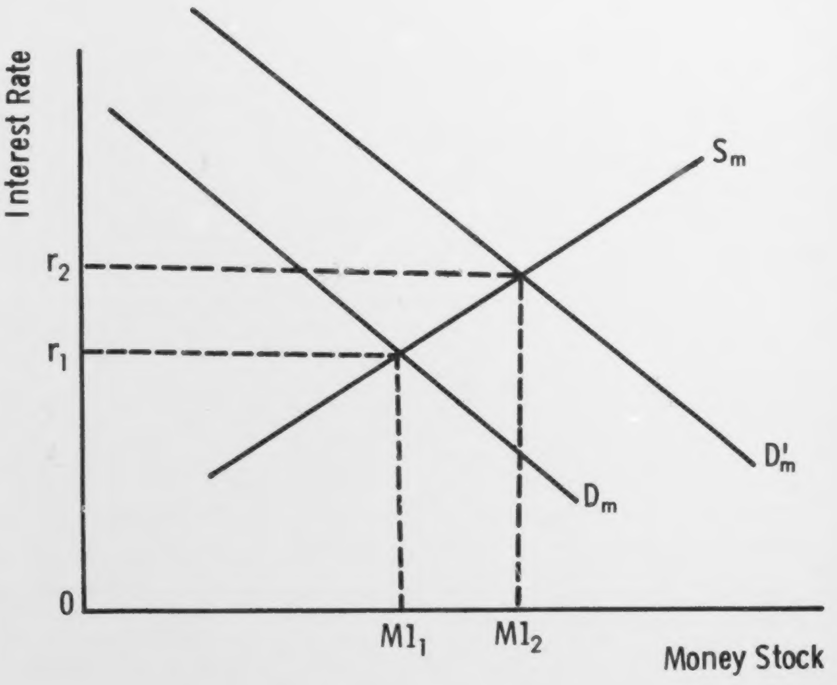
(1) An increase in the money supply increases (decreases) the rate of interest.

Perhaps no economic term is so often misused as "the money supply." The money supply (as the term is used properly) is a schedule showing the volume of money that the nation's banking system would offer at varying rates of interest (or at varying spreads between commercial loan rates and the rate charged for loans from one bank to another of bank reserves). The money supply cannot be observed directly, but can be estimated statistically. The quantity that we do observe directly is the money stock (M1 and M2): the equilibrium amount of money in circulation, determined by the interaction of the supply of money and the demand for money. The Federal Reserve System is careful to make the distinction between the money supply (the schedule) and the money stock (which they call "the monetary aggregates"); the press is rarely so careful.

The Keynesian interpretation of the effect of increasing the money supply is that, if the banking system is willing to offer more money at any given rate of interest, then the interest rate, the price of money, should fall, assuming the demand for money remains constant.

When the *stock* of money rises, in the Keynesian view, with the *supply* of money having remained fixed, one would expect the interest rate to rise because it is the *demand* for money which has risen, causing the equilibrium *stock* of money to rise. That situation is depicted in Figure I. In week 1, the demand for money is D_m and the supply of money is S_m. The stock of money is $M1_1$. In week 2, the supply of money remains fixed at S_m, but the demand for money rises to D'_m, perhaps due to an increase in the borrowing needs of the U.S. Treasury. Thus, the stock of money reported by the Federal Reserve increases to $M1_2$, and the interest rate increases from r_1 to r_2. *Note, however, that the increases in M1 and in the rate of interest were caused by an increase in the demand for money, the supply of money having remained fixed.*

Figure 1
Keynesian Model



For the Keynesians, the deficit is a means to a desired end—the maintenance of a high level of economic activity. For monetarists, federal deficits lead only to pernicious effects.

Looking again at the Keynesian model shown in Figure I, note what would occur if the supply of money had indeed increased. If, at any given rate of interest, the banking system were willing to offer more money than shown on S_m, the supply schedule would shift to the right. The effect would be to generate a greater money stock at (if D_m remains unchanged) a lower rate of interest.

In Figure I, the demand for money is shown as a declining function of the interest rate and the supply of money as an increasing function of the interest rate. This is a thoroughly Keynesian view. (For further discussion, see Laidler, 1970.)

The rational expectations/monetarist interpretation of the money supply-interest rate puzzle is quite different. This explanation contends that lenders demand some real rate of return (a real rate of interest) on their loans, whether it is a bank loan or the purchase of a Treasury bill (a short-term loan to the Federal government). That is, if the loan is made in amount L, after one year the lender wants to have $L(1+r)$ dollars *in purchasing power*, where r is the real rate of interest required. If the price level is rising at some annual rate p (p is the rate of inflation), then, to maintain the real rate of interest, after one year the lender must have $L(1+r)(1+p)$ dollars. Thus, rather than charging a rate of interest r, to maintain the value of his loan, the lender must charge a rate of $(r+rp+p)$ percent. If compounding is continuous, the required nominal rate of interest is simply $r+p$ percent.

If lenders form rational expectations on the basis of new monetarist theory, then as soon as the supply of money is increased, the lenders "know" that the price level will begin to rise. They will, then, increase the nominal interest rates they charge to reflect their rational expectations of increasing prices. Thus, rational expectations theorists see money supply increases as sources of rising interest rates, and Keynesians see money demand increases (reflected in increases in the money stock) as the source of increasing interest rates.

(2) Deficits don't (do) matter.

For Keynesians, the role of government in stabilizing the level of economic activity is closely related to the size of the government budget deficit. That is, it is the government's *net* contribution to the level of economic activity (spending less taxes) that is the variable that compensates for inadequacies in the level of planned private spending. In times of economic slack, for example, a deficit financed by borrowing from the private sector, the Keynesians claim, will call forth resources not in use, as will a deficit financed by the Federal Reserve System.

Keynesians do, however, make distinctions between deficits financed by borrowing from the private sector and deficits financed by borrowing from the Fed. If the Federal government borrows from the private sector, it increases the demand for money without increasing the supply of money. Thus, while unused physical resources (in times of economic slack) are called into use, upward pressure is placed on interest rates. Some degree of crowding out is introduced.

If, on the other hand, the Federal government finances its deficit by borrowing from the Federal Reserve, the deficit is said to be "monetized." That is, the government's contribution to the demand for money is balanced by the Federal Reserve's creation of money. The result is to call forth unused physical resources without placing upward pressure on interest rates.

At this writing, however, the Federal Reserve has shown great reluctance to finance the deficit expected for fiscal year 1983. Hence, the Keynesians argue, there will be great crowding out, as the tight money policies of the Fed, in the face of great credit demand by the Federal government, will generate high interest rates and a substitution of government spending for private investment. It is important to remember, however, that the crowding out effect due to the expected deficit is only expected, in the Keynesian model, when the Federal Reserve refuses to increase the money stock sufficiently to monetize the deficit. (For an excellent discussion of crowding out, see Roley, 1981.)

For monetarists, the role of the deficit is even more extreme. The rational expectations/monetarists do not acknowledge the existence of economic slack, except in the very short run. Thus, they argue, the presence of a deficit, when privately financed, necessarily means that an amount of private capital formation just equal to the size of the deficit will be crowded out. The result is that there is no change in the level of economic activity, but a substitution of public for private output. Moreover, because, they argue, there can be no economic slack, borrowing from the Fed (increasing the money stock) to finance a deficit also cannot affect real output. If the Fed increases the money stock, the price level will rise. The increase in the price level will be reflected in an increase in interest rates. As interest rates rise, private investment (purchases of plant and equipment) will be reduced. Thus, the monetarists argue, financing a deficit by borrowing from the Fed will substitute public for private output *and* will lead to an increase in the price level.

For both of the two major schools of macroeconomic theory, then, the deficit is important. For the Keynesians, the deficit is a means to a desired end—the maintenance of a high level of economic activity. It may tend to crowd out some private activity, but, in the face of economic slack, that crowding out can be avoided by the monetization of the deficit. For monetarists, federal deficits lead only to pernicious effects. Because they do not admit the possibility of economic slack, rational expectations/monetarists deny any salutory effect from deficit financing. Whether privately financed or monetarized, deficits lead *only* to crowding out and, if monetized, only to increased rates of inflation. Further, many who follow the monetarist school hold personal values (apart from their macroeconomic analyses) which lead them to find the substitution of public for private investment undesirable (see especially Friedman and Friedman, 1980).

(3) The Role of Savings and the Essence of Reaganomics.

Much of the current debate on economic policy has its origin in differences of opinion as to the role of the rate of savings in determining the level of economic activity. A view often espoused by economists is the Keynesian "paradox of thrift."

It is clear that, for any individual or household, wealth and high levels of consumption are achieved through thrift (the individual's or his/her benefactor's). Similarly, for society as a whole, the only way to increase the capital stock and, thus, achieve economic growth is through consuming less than is currently produced (saving) and committing that part of production which is saved to productive investment.

But Keynesian economic analysis is a study of short-run income maintenance. In the Keynesian model, at less than full employment, income is determined by levels of spending. In the short run, more saving means less spending and, therefore, lower income. That is, when savings increase, firms see inventories increasing and lay off workers and idle equipment. That process continues until income has fallen to the point that saving has fallen (dragged down by reduced incomes) to equal planned investment plus the deficit. Hence, in the Keynesian system, increasing the savings rate without increasing either planned investment or the government deficit (or both) must mean a decline in income.

Note one crucial point. Theories of investment indicate that, as incomes fall, business expectations fall with them. Thus, even though interest rates may fall during periods of recession, there is no tendency for intended investment to rise to meet the increase in the savings rate which may have touched off the reduction in incomes. One cannot, then, the Keynesians argue, "save" oneself out of a recession. The cure for a recession is increased investment, a larger deficit, a lower savings rate, or some combination of the three.

Keynesian economic analysis is a study of short-run income maintenance. The acceptance of the foundations of supply-side economics requires that one reject the importance of short-run economic indicators.

The rational expectations/monetarist view sees savings in quite another manner. Remember that this school sees the economy as being always at or approaching full employment. Increased savings, then, do not mean lower real output, but mean (through a perfect adjustment of capital markets) increased investment to compensate for decreased consumption. The level of output remains fixed, but more capital goods are to be produced. Hence, the rational expectations/monetarists see increased savings rates not as affecting income in the short run at all but, rather, as allowing a greater increase in the full employment level of output over time. The two views outlined above, then, allow no room for agreement; they are in diametric opposition in terms of the role of savings.

Viewed in this way, what is the essence of the Reagan economic plan? The motivation of the Reagan plan to stimulate private saving is founded, therefore, on the rational expectations/monetarist theory of the economy in perpetual full employment equilibrium. The level of aggregate demand is always, in that interpretation, sufficient to absorb the full potential output of the economy. The actual level of output, then, is determined only by the economy's ability to supply goods and services (thus, the rather unfortunate term, "supply-side economics"). If one wants to increase aggregate supply and, therefore, aggregate income at full employment, one must encourage economic growth. The means to that end is the encouragement of saving (the substitution of future consumption for present consumption).

As follows, Reaganomics does not accept the need for short-run maintenance of the national income; national income, adherents of the Administration's view tell us, will always seek its potential level. The thrust of national economic policy, according to that view, should be the encouragement of economic growth, which requires the encouragement of savings. To evaluate Reaganomics on the basis of short-run economic phenomena (unemployment, capacity utilization, GNP) is to violate the internal logic of "supply-side" economics. The acceptance of the foundations of supply-side economics requires that one reject the importance of short-run economic indicators. The only test of Reaganomics that is consistent with its own intellectual roots is the effect that the Administration's policies have on the growth of the productive capacity of the economy.

Conclusion

For economists, the outcome of the debate between the neo-Keynesians and the rational expectations/monetarists will depend on the development and empirical testing of several theoretical hypotheses. For example, can the economy persist in a condition in which labor markets and capital markets are out of equilibrium, in which there is less than full employment of the nation's means of production? If so, the Keynesian model, as revised, is as relevant today as it ever was. If not, rational expectations/monetarism will be the economists' touchstone of the future.

For the public, however, the resolution of the two conflicting approaches to the study of the economy will have a far more important test: Do the policies of the Reagan Administration offer a better standard of living than those of previous administrations (influenced by the ideas of Keynes and his followers)? Neither at the theoretical nor at the practical level have these questions been answered adequately. Only the coming years can tell.

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Research Notes

Seasonal Adjustment of Kansas Unemployment Data

With the highest level of unemployment in over forty years, unemployment rates are attracting considerable attention. However, it should be noted that a significant portion of the monthly variation in unemployment rates is often due to seasonal influences rather than changes in the economy. The purpose of this note is to discuss the seasonal influences in employment data and to develop seasonally adjusted unemployment data for Kansas.

Seasonal factors include weather, holidays, harvests, school schedules, and changeovers in industrial production. These factors persist from year to year, producing a pattern in the reported unemployment rates. For example, January traditionally has one of the highest levels of unemployment because of holiday layoffs at retail outlets and the slowdown in outdoor work due to weather conditions.

Because the magnitude of seasonal influences can obscure other changes in the data, seasonal adjustment techniques have been developed as a control. Climatic and institutional factors—the main cause of seasonal influences on time series data—are usually not under the control of policymakers. Consequently, a major benefit of seasonally adjusted data is to identify those factors which, in fact, can be affected by business and policy decisions. Entirely different conclusions can be reached from examining adjusted-versus-unadjusted data, as the following example demonstrates:

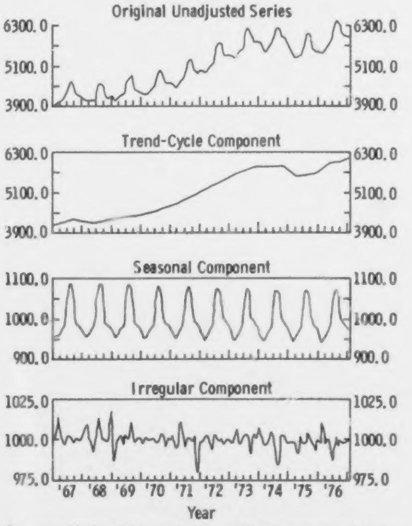
Table 1
Kansas Unemployment Rates

	December 1980	January 1981
Seasonally Unadjusted	3.9%	4.1%
Seasonally Adjusted	3.9%	3.6%

The original unadjusted rates indicate that unemployment rose from December, 1980 to January 1981. Yet, accounting for seasonality, the unemployment levels actually declined. It is important to recognize that, although the seasonally adjusted unemployment rates for January, 1981 are lower than the unadjusted rates, the actual numbers of unemployed remain the same.

The seasonal adjustment method used by the Institute for Economic and Business Research (IEBR) to adjust unemployment data is modeled after the techniques used by the Department of Labor's Bureau of Labor Statistics.[1] The underlying premise behind seasonal adjustment is that a time series, such as unemployment data, can be broken down into four distinct components: trend (T), cycle (C), seasonal (S), and irregular (I). The trend and cycle components are the parts of the time series which vary over a long period of time. For adjustment purposes, they will be considered together as the trend-cycle (TC) component. Unpredicable movements in the time series, such as floods and strikes, are measured by the irregular component. As previously stated, the seasonal component varies over twelve months in response to changes in weather and institutional factors. This is the component that seasonal adjustment techniques are designed to filter. Figure 1 graphically depicts the effects of each of these components.

Figure 1
Components of Changes in Employment of White Males, 20-24 Years Old, 1967-76



Source: National Commission on Employment and Labor Force Statistics, *Data Collection Processing and Presentation: National and Local*, Government Printing Office, 1980.

IEBR's model assumes that the relationship between these four components is multiplicative. In the multiplicative model, the original series is assumed to be the *product* of TC, S, and I. Seasonal changes in the model are assumed to be proportional to changes in the level of the series. The multiplicative model can be expressed as $U = TC \times S \times I$, where U is the original time series, i.e., the raw unemployment rate. The first step in separating the seasonal component from the others is to calculate a twelve-month centered moving average around each observation in the series. The resulting time series is intended to approximate the trend-cycle component of unemployment. By dividing the original series, U, by the trend-cycle component, the seasonal and irregular components are isolated in percentage terms.

$$U/TC = \frac{TC \times S \times I}{TC} = S \times I$$

To remove the irregular component, the mean of S times I is taken over a number of years for each month. For example, January data from 1970-1980 are averaged to obtain the seasonal component for January, given that the irregular component averages out over time. The seasonal component is then divided into the original series to obtain the seasonally adjusted data:

$$\frac{U}{S} = \frac{TC \times S \times I}{S} = TC \times I = \text{Seasonally Adjusted Data}$$

Figure 2
Comparison of Seasonally Adjusted and Original Unemployment Data for Kansas

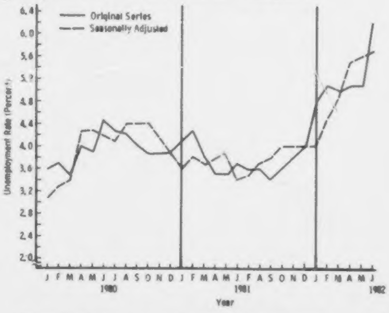
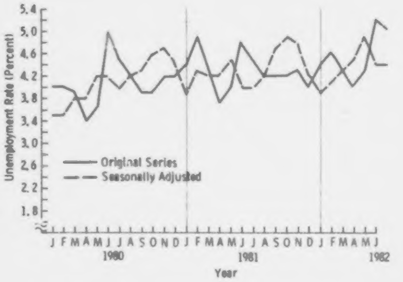


Figure 2 draws a comparison between seasonally adjusted and unadjusted data for Kansas. As can be seen, much of the movement in the data can be explained by seasonality. Unemployment rates in the early winter and summer months usually climb due to seasonal factors, whereas spring and fall unemployment levels may not be as low as depicted in the original data.

Seasonal adjustment factors will vary among different regions according to differences in their economic climates and institutional factors. Therefore, separate seasonal adjustment indexes should be constructed for each area. The Institute has developed such indexes for the Kansas SMSA's and for the Kansas counties for which unemployment data is regularly reported in this *Review*. Reports of their monthly seasonally adjusted rates will begin with the next issue of the *Review*.

Figure 3
Comparison of Seasonally Adjusted and Original Unemployment Data for Douglas County



For illustrative purposes, raw and seasonally adjusted unemployment data for Douglas County are shown in Figure 3. Unemployment in Douglas County tends to be higher in winter months and then declines as spring approaches and farm and construction activity gets underway. It tends to rise again in May and June due to lower enrollments in the substantial number of the area's schools and universities. These factors tend to bias the true unemployment pattern which is uncovered only after deseasonalization.

The major limitation to the seasonal adjustment process is that current adjustments are based on historical data. Therefore, if seasonal fluctuations in past years do not accurately reflect the seasonal pattern of the current time period, this adjustment method may produce misleading results.

Despite this limitation, the seasonally adjusted data when compared to the original series should provide a better explanation of the factors influencing unemployment.

Nancy Brown Johnson
Research Assistant
The Institute for Economic
and Business Research

Notes

1. For more information, see Department of Labor Bureau of Labor Statistics, *A Guide to Seasonal Adjustment of Labor Force Data*, March 1982.

2. For details on computing the centered moving average, see the reference listed in note 1.

Developing a Kansas Labor Market Information System

Introduction

State and local planners, policymakers, and analysts often complain that Kansas labor market data is incomplete and inadequate. Their complaint is legitimate: in fact, the state and local labor markets are data deficient, and the data which is available is dispersed and not readily accessible.

This disorganized data make it difficult for the planner and analyst interested in a particular set of data to determine its existence and, if it exists, its location. Further, even with the expenditure of a significant amount of effort, no guarantee exists that the searcher will locate *all* the available data. As a result, considerable time, energy, and resources are wasted solely in the data search. In summary, the current unorganized approach to labor market data collection and dissemination has proven to be both inefficient and ineffective.

This is a problem to all state and local jurisdictions. To resolve the problems faced by those seeking labor market data in Kansas, the Institute for Economic and Business Research (IEBR) is developing a Kansas labor market information system (LMIS). This information system will provide a coherent structure to the existing Kansas labor market data by listing all available data sources in one repository. By so doing, the search for data will be enormously simplified: all that the labor market data searcher needs to do is use the information system to find a convenient location for those sources which contain the sought-for data. In addition to helping the researcher find and properly use the collected data, IEBR's system also will help the researcher identify the weaknesses of the existing data, thereby encouraging the acquisition and development of new data bases. The following section describes the system in detail.

Nature of the System

In more concrete terms, LMIS will be an "on line" data base which will be accessed through the University of Kansas Academic Computer Center's time-sharing system. The data base will be structured as a complete bibliography of all sources of Kansas labor market information and will contain the source of the data, the type of data contained in the source, and some specific reference (i.e., table numbers or page numbers) to aid the user in finding the data. The data sources may be in the form of periodicals, published articles, or other established data bases. As well, the data base will be updated continually as the sources and types of information concerning the Kansas labor market continue to expand.

Design

The LMIS is designed with the primary concern of making the sources of labor market data readily available to the user as efficiently and effectively as possible. All of the sources of labor market data will be classified in terms of the type of data they contain. For example, some of the basic categories will contain data by geographic region (i.e., information at the state and substate level; city, county, and SMSA will be included, if available), by general market characteristics, and by specific market characteristics. Examples of general labor market characteristics are the size of the civilian labor force and the unemployment rate. An example of a specific market characteristic would be manufacturing productivity in, say, Wichita.

Of course, many sources of data will contain more than one type of labor market data. In such cases, the source of data would be classified with all of the different types of data it contains. That is, each time a new reference source is obtained, the source will be "marked" as containing some of the above categories of information. Moreover, as much additional reference text will be included with each "category" as possible (i.e., page numbers, table numbers, etc.). Although the LMIS will be structured like a bibliography, it will, in fact, function as an index. This will help to make the LMIS a powerful tool for the user in search of labor market data.

Method to Use the System

To obtain the desired information, the user needs only to follow a simple process. First, the user accesses the Academic Computer Center's time-sharing system and then invokes the LMIS which, upon being "called," lists the categories of data it contains. In the next step, the user chooses the needed category and, then, through a code, signals the chosen system. The system will then print the list of sources either at the terminal or provide a hard copy list of sources, along with references for each source which contains the desired data. If interested in more than one type of data or desiring data which combine several categories, then the user will be allowed, to a point, to combine categories in the request for data sources. The limitations on combining several categories of data types are solely to keep the system efficient and within a reasonable cost range.

The only immediate limitations to this system are that the user must either have an account with the Academic Computer Center at the University of Kansas or access the system through the Institute for Economic and Business Research. For the user who does not have an account, IEBR staff will run the request and provide a hard copy of the output. A minimum operational cost might be charged for this service.

Because of the relatively clean structure of the data base and of the accessing program, LMIS will be a dynamic information system. The changes necessary to keep the data base current will be made by the IEBR research staff. The process of expanding the data categories will be primarily a matter of simply adding new documentation to the already existing list whenever necessary. The accessing program is also designed to contribute to the overall system's growth and refinement: the user will be able to leave messages to IEBR staff suggesting corrections, additions, revisions, etc., that will help maintain the system's accuracy and integrity.

Concluding Remarks

In summary, the Kansas Labor Market Information System (LMIS) will be an organized reference index for people interested in Kansas labor market data. It will provide easy reference for state and local planners and analysts. **LMIS should be operational by year's end** and, if resources permit, will be kept operational on a continuing basis. Depending upon the extent of user response, IEBR might expand this system to cover the data in addition to their references and, if possible, references for national data.

State Center for Census Data Established

The State Data Center Program was initiated by the Census Bureau in 1978 to improve dissemination of Census material. The Institute for Economic and Business Research and the Center for Public Affairs at the University of Kansas share affiliate status in the State Data Center for Kansas. With affiliate status, the Institute for Economic and Business Research receives or has access to most major Census Bureau publications for Kansas and neighboring states—Colorado, Missouri, Nebraska, and Oklahoma. Specific published Census reports received or to be received include:

A. ***1970 Census of Population and Housing***
  1. Characteristics of the population
  2. Housing characteristics—cities and counties
  3. Metropolitan housing characteristics—Kansas City, Topeka, and Wichita
  4. Block statistics for Kansas urbanized areas
  5. Census tracts for Kansas SMSA's

B. ***1980 Census of Population and Housing***
  1. Same breakdown as (A) above, plus
  2. Summary statistics for governmental units and SMSA's

C. **1977 Economic *Censuses***
  1. *Census of Retail Trade*
  2. *Census of Wholesale Trade*
  3. *Census of Service Industries*
  4. *Census of Construction Industries*
  5. *Census of Manufacturers*
  6. *Census of Mineral Industries*
  7. *Census of Transportation*

D. ***Census of Governments***

E. ***Census of Agriculture*—1974 and 1978**

F. **Current Economic Reports**

G. **Current Demographic Reports**

Additionally, as an affiliate center, the Institute for Economic and Business Research receives Census information in tape form which includes the published data as well as more detailed data which will not be published.

Economic Conditions

The National Review

At the end of the second quarter of 1982 (1982:2), real GNP—the inflation adjusted measure of goods and services production—was 0.3 percent lower than the comparable figure for 1979:3. This single statistic is quite remarkable, indicating that overall for almost three years the U.S. economy has not expanded.

Given this unfortunate background, it is not surprising that analysts and policymakers are anxiously waiting to see whether the economy is at last poised to pursue the long-promised period of sustained growth. Odds are that, at least over the short term, they are going to be disappointed. After declining over 5.0 percent in both 1981:4 and 1982:1, GNP did turn up 2.1 percent in 1982:2 and about 1.5 percent in 1982:3. However, this anemic growth has been concentrated in the service sector and not in capital goods, autos, durables, or housing; that is, *not* in those sectors which traditionally lead a recovery and whose growth could lay the groundwork for a sustained expansion.

The tale of this latest recession's impact on output is further told in Table 1 below. The Table breaks GNP into its major components and shows that personal consumption has been reasonably stable over the recession but that investment has been highly volatile and, on average, down sharply, 12.4 percent over the four quarters from 1981:3-1982:2. Since new capital formation is a prerequisite for any sustained recovery, these figures may be forewarning further economic weakness. On the plus side, investment did grow 12.0 percent in 1982:2, the latest quarter for which data is available, but early indications are that it turned down again in 1982:3.

The principal cause of weakness in the key hard goods sectors continues to be high interest rates and lack of confidence in the economy on the part of businesses and consumers. Although interest rates in general dropped significantly during the third quarter, they did so from historically very high real levels (see the recent April-May issue of this *Review* for more details) causing the present levels to still be high relative to inflation. As such, buyers may be holding back hoping to benefit from further declines which have been projected.

Another significant element in the interest rate pattern which deserves attention is the growing spread between short- and long-term rates. Because business investment in plant and equipment and consumer purchases of housing are usually financed through long-term borrowing, improvement in these areas has been hamstrung by the growing spread, as detailed in Table 2 below. In general, long-term rates exceed those on short-term instruments by an increment designed to incorporate the greater risk involved in holding long-term instruments. However, since most of the recent interest rate decline has been concentrated in short-term securities, the spread has widened considerably over what it was previously, as can be discerned from the Table. The reason for this phenomenon is apparently investor concerns that the projected excessively high long-term federal deficits will cause higher inflation and interest rates in the future. As a result, as of mid-September, mortgage rates and long-term bond rates continue to remain at levels which inhibit substantial improvement in housing and capital formation.

Table 1
National Product Accounts in 1972 Dollars Compounded Annual Rates of Change

	81:3	81:4	82:1	82:2	81:3-82:2
Gross National Product	2.2%	− 5.3%	− 5.1%	2.1%	− 1.8%
Personal Consumption Expenditures	2.9	− 3.3	2.4	2.0	1.0
Gross Private Domestic Investment	7.0	−22.6	−36.5	12.0	−12.4
Govt. Purchases of Goods & Services	3.6	7.0	− 2.9	− 6.1	0.3

Outlook

As usual, disagreement exists among analysts regarding the timing and intensity of an economic upturn. The consensus projection is for fourth quarter growth of about 3.0 percent and 3.0-3.5 percent thereafter in 1983. A spate of bad economic news for August which is presently being released may, however, cause forecasters to revise these projections downward. In particular, housing starts, retail sales, and industrial production were all down in August. Also, the composite index of leading economic indicators declined for August after registering four consecutive monthly increases.

The keys to watch will continue to be the behavior of consumers and interest rates. The retail sales decline of 0.9 percent in August disappointed many analysts who had hoped that the July tax cut and social security increase would fuel a sustained expansion in consumer spending. Rather, it seems the additional income went into savings as high unemployment and uncertain signals from Washington continue to foster pessimism among consumers. This assertion is borne out by the sharp decline in consumer confidence registered in August by the Conference Board's Index.

We turn now to the specifics in the outlook.

Production

Industrial production was down 0.5 percent in August, and factories were only used at 69.4 percent of capacity during that month. Business has completed an inventory sell-off and is set to step up production. As of yet, however, the signal from consumers to do so has not been given. Auto producers have scaled down production plans for the remainder of the year. Housing starts, down 16 percent in August after a 32 percent jump in July, are not expected to exhibit further improvement until builders are able to sell off already constructed units.

Employment

Having temporarily stabilized at 9.8 percent in August, unemployment is generally expected to hit 10 percent with the release of September figures. No one is expecting substantial improvement in the near future for employment given the lingering weakness in manufacturing. Look for unemployment to remain above 9.0 percent until the spring months. Improvements will be centered on service sector employment with manufacturing continuing to record depression-like unemployment levels.

Table 2
The Structure of Selected Interest Rates

	Mid-September 1982	Previous Month	Previous Year
Short-Term Rates			
New Three-month Treasury Bills	7.9%	8.5%	14.3%
New Six-month Treasury Bills	9.5	9.6	14.5
Three-month Commercial Paper	10.3	10.5	16.6
Long-term Rates			
New Aaa Utilities	14.1%	13.9%	17.[illegible]%
U.S. Government	11.9	11.9	14.1
Municipal Bond Index	10.8	10.7	13.2

Sales

Faced with the failure of the summer tax cut and social security increase to stimulate spending, hopes have now been pinned on the impending release of funds which have been locked into all-savers certificates for the past year. Thirty-six billion dollars worth of these certificates will mature during October, and, with the presently lower rates of return on insured instruments, there is some reason to hope consumers will use this surge in liquidity to make some major purchases.

To be certain, many consumers who have been delaying major purchases may soon find themselves in a position in which they can wait little longer. The August and early September pullback (early September domestic auto sales were off 29 percent) in sales may have been due, in part, to consumers taking a wait-and-see attitude regarding possible further interest rate declines and possible price cuts for big-ticket items, such as autos.

If consumers receive the right signals on prices and interest rates, look for stronger holiday sales than are currently being projected.

Prices

Moderating inflation has for sometime been the one consistent piece of good economic news—a fact which has not escaped Washington's attention. At an annual rate, inflation was 5.4 percent over the first seven months of 1982. August's increase in the CPI of only 0.3 percent is below this average.

Although political figures would like to take credit for the downturn in inflation, the true cause is linked to events in the world markets for major commodities such as food and petroleum and to the restrictive monetary policy pursued by the Federal Reserve. Also, the general demand-side weakness during the recession has made it difficult for businesses to pass through price increases.

Looking forward, price moderation can be expected to continue over the next several months. The producer price index for finished goods rose 0.6 percent in both July and August. However, the annualized rate of increase over the first seven months of 1982 was only 3.1 percent. Peering farther into the production pipeline, the crude materials price index declined in both July and August, 1.0 and 0.6 percent respectively. And the intermediate goods index also declined in August after modest June and July increases. Changes in these producers' indexes are harbingers of future price changes to consumers over the immediate months. Thus, it seems very reasonable to expect annual inflation for 1982 to be under 5.0 percent for the first time since 1976. The abundant U.S. food harvest and continuing weakness in petroleum demand will propel this same trend on into 1983.

Summing up, the strong recovery which was hoped for does not seem to be immediately materializing. The great deal of uncertainty which exists over the economy has made both households and businesses reluctant to make the major spending commitments necessary to stimulate the turnaround. There may yet be a silver lining, however. As new Council of Economic Advisors Chairman Martin Feldstein argues, a slow gradual expansion may be more sustainable and less inflationary over the long term than would a period of rapid growth.

Richard Sexton
Research Economist
The Institute for Economic
and Business Research

The Kansas Economy

Employment

Kansas' unemployment continued to rise for the second straight quarter. Throughout the second quarter, the unemployment rate (seasonally unadjusted) rose from 5.1 percent to 6.2 percent. Consistent with seasonal patterns, this increase was due to recent graduates entering the labor market and youths seeking summer employment (see Research Note).

The June unemployment level was the highest experienced in Kansas since the 1970-71 recession when unemployment rose to 6.7 percent. As well, a high level of unemployment lasted throughout the summer: July unemployment stood at 5.6 percent, and August rose to 6.0 percent.

Manufacturing, durable goods, and state and local government—the major sectors for employment in the Kansas economy—experienced continuing declines. In contrast, employment in the service sector rose almost 2.0 percent in the second quarter. In the public sector, the number of employees rose in Federal government, while state and local government experienced a decline.

Geographically, unemployment rose in almost all Kansas counties. The heavily industrialized areas of the state experienced relatively high levels of unemployment in the second quarter and beyond. Montgomery County's unemployment rate more than doubled, rising to the highest level in the state (from 5.3 percent in January to 12.3 percent in July of this year). Since a significant portion of heavy manufacturing is tied to the relatively depressed oil industry, immediate recovery is not imminent. Atchison and Reno also experienced high levels of unemployment. Atchison's rates rose from 6.4 percent in July to 8.6 percent in August; Reno County's rates increased to 9.8 percent due primarily to a packing plant closure.

The rise in Wichita's unemployment rate to 9.8 percent in August has a significant bearing on the Kansas economy. Almost 21,900 people are currently unemployed in Wichita, accounting for approximately 30 percent of Kansas' total unemployment. The 1970-71 recession was the last period when the unemployment rate in Wichita rose this high. Table 1 illustrates a comparison between the 1970-71 recession and the current one. As depicted, the January levels of unemployment for 1970 started below 1982's, but then increased at a greater pace. This trend continued until August when 1982 rates exceeded 1970's.

Table 1
Wichita Unemployment Rates—1970 and 1971 Compared to 1982 (Seasonally Unadjusted)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	4.5	5.1	5.6	6.8	7.0	7.8	8.1	9.8				
1971	10.1	10.2	10.3	10.0	10.1	11.3	10.0	8.9	7.9	7.0	7.2	6.4
1970	4.3	5.9	6.5	7.8	8.3	10.0	9.4	9.1	8.7	8.8	9.6	9.0

In addition to the unemployment rate rising faster in the 1970-71 recession than presently, several other indicators show that, although unfavorable, the current economy in Wichita is better off than during the previous recession. One reason is the expanding employment base. Since 1970, the civilian labor force increased by 60,000. Table 2 shows on average that more people are currently unemployed; however, at the same time, more people are also employed. Furthermore, employment growth in the current recession has risen at a much faster rate than earlier. Another factor contributing to Wichita's comparatively better condition in this recession is that a majority of the increase in Wichita's employment over the last twelve years has not been tied directly to the few major aircraft companies which are highly sensitive to a recessionary environment. While the aircraft employment base rose by 10,000, overall Wichita employment rose by 60,000. Consequently, the impact of the present recession has been moderated due to the development of a broader economic base.

Despite these differences between the effects of the two recessions, it is likely that recovery from the current recession will be slow, as was recovery from the 1970-71 downturn.

Table 2
Wichita Employment and Unemployment--1970 and 1982

	1970 Annual Average	1982 Average of First Seven Months	Difference
Civilian Labor Force	165,000	225,340	37%
Employed	151,650	210,870	39%
Unemployed	13,350	14,470	8%

Agriculture

Production

Farmers in the U.S. are in the process of wrapping up another bumper harvest. Crop production in 1982 is expected to closely approximate last year's record harvest. The unfortunate, but not surprising result will be declining net farm income for the third consecutive year.

Information on the expected 1982 harvest for major field crops is contained in Table 1 (p. 17). Production of corn, wheat, and soybeans is expected to set records. The boosts in corn and wheat production which are projected come in spite of 1982 reductions in acreage for these crops of 2.1 and 2.5 percent, respectively. Although these reductions are significant, they are far less than what was hoped for under the Administration's set-aside program.

Kansas farmers are experiencing a strong harvest comparable to the national trend. Most notable is the strong recovery of the Kansas wheat crop from last year's disaster. The indicated 1982 yield of 462 million bushels is 51 percent above 1981's yield and 10 percent above the previous record 1980 yield. Almost certainly, the projected record will be due to a combination of higher yield per acre and increased acreage. Kansas farmers planted 13.2 million acres in wheat, an all-time record planting and an increase of 8.2 percent over last year. The indicated 35 bushel yield/acre is the third highest on record—surpassed only by 1973 and 1979 yields.

Additional Kansas crop data are contained in Table 2 (p. 17). Grain sorghum, Kansas' second most important cash crop, was grown on 7.3 percent fewer acres in 1982 than 1981. In fact, the 3.3 million acres available for harvest in 1982 represented the smallest amount since 1967. In addition to reduced acreage, sorghum grain yields are indicated to be off 8 bu./acre in 1982, combining for an overall crop reduction of 16 percent from last year. No doubt the reduction in sorghum planting in 1982 is in large part attributable to the grain's continuing dismal price performance.

The indicated 1982 soybean yield of 46.8 million bushels also represents a Kansas record, eclipsing the previous record set in 1980 by 1.3 million bushels. Kansas corn grain production, however, is expected to be down 8.0 percent from last year and almost 15 percent from the record year in 1979. This reduction is due to a decline in both acreage and per acre yield, either of which may be attributable to corn's poor price performance over the past year.

Looking ahead, early reports are that seeding for the 1983 winter wheat crop is being delayed in some parts of the state due to excessive dryness. These emerging drought conditions may also cause actual harvests of remaining outstanding crops to come in somewhat below their indicated levels.

In respect to livestock, beef production in the second half of 1982 is expected to rise 1.0 to 2.0 percent above year-ago levels. Beef production in 1983 is expected to decline somewhat because of a reduced feeder cattle inventory. In Kansas as of September 1, there were 1.2 million cattle on feed, up 80 thousand from last year but unchanged from August.

Hog production continues to be reduced engendering continued high prices. Commercial hog slaughter in the U.S. in the third quarter is projected to be 12 percent below a year ago. Fourth quarter hog slaughter is expected to be down even further, about 20 percent, as producers will draw from a small existing inventory and attempt to rebuild breeding herds for 1983.

Prices and Incomes

Price and income news for farmers is little changed from what it has been for the past several months: favorable for livestock, disappointing for crops. As projected, overall farm income will decline in 1982 for the third consecutive year. Net cash income in 1982 is expected to be about 31 billion dollars, a 1.0 percent decline from last year and 16 percent below the record high of 37 billion set in 1979. Adjusting cash receipts and expenses for noncash income and expenses and making adjustments for farm inventory changes produce a measure of net farm income. Based upon this measure, in real terms (inflation adjusted), 1982 net income is expected to be about 10 billion dollars, only *half* of what it was in 1979.

Looking at some specifics, prices received in Kansas in mid-August for wheat, corn, sorghum, and soybeans were all below their year-ago values, and all were also below the prices recorded the previous month. This latest surge downward in prices is attributable to news of the impending record harvest. Prices have dropped so low for most major grains, including wheat, that current price levels are below the existing government loan rates and well below the mandated target prices. With the benefit of hindsight, it has become apparent that Kansas farmers would have been better off if more of them had complied with the set-aside program and made themselves eligible for support payments.

The net result of the huge harvest and depressed prices has been a flood of grain into already overcrowded storage facilities. Wheat stocks as of June 1, 1983 are projected by the USDA to be above 1.3 billion bushels, the highest level since the early 1960s. Prices for wheat during 1982-83 are expected to range between $3.45-$3.65 a bushel, about $0.10-$0.15 below last year's already low price.

Mid-August hog prices in Kansas stood at $59.90/cwt., an $11.50 jump from a year ago. Cattle prices were up in August $2.40 per cwt. from the previous month to $59.60. That figure is $0.80 above the year-ago price. Given that hog production is expected to fall even farther in the fourth quarter, prices are a sure bet to go to $60.00, perhaps topping out at around $62.00. Cattle prices are also expected to climb as marketings remain sluggish. Look for additional gains of $2.00-$4.00 per cwt. this fall, with prices for feed cattle climbing above $70.00 during the first half of 1983.

Although farming does not contribute directly to a major percentage of Kansas income, many of Kansas' businesses and industries are dependent upon the farm economy. With high interest rates and low farm incomes, implement and building materials dealers are certain to suffer. Since this will be the third straight year of decreased capital spending, the squeeze on some dealers may become critical.

As a final note, poor farm prices generally translate into moderation at the consumer level. The current year has not been an exception. Food prices over the first seven months of 1982 rose only 3.5 percent. Overall 1982 food price hikes should be below 6.0 percent. Of course, consumers might be advised to stock up on beef and pork, if they already haven't.

Nancy Brown Johnson, Research Assistant
Richard Sexton, Research Economist
The Institute for Economic and
Business Research

Table 1
1982 U.S. Production of Selected Major Field Crops

Crop	Production (thousand's of bu.) 1981	Indicated 1982 as of 9/1/82
Corn for Grain	8,315,088	8,318,678
Sorghum for Grain	880,266	819,287
Oats	591,478	599,008
Barley	478,301	516,192
All Wheat	2,793,436	2,815,508
Soybeans	2,030,452	2,313,880

Table 2
1982 Kansas Production of Selected Major Field Crops

	Acreage (thou.'s)		Yield/Acre (bu.)		Production (thou. bu.)			
Crop	Harvested 1981	For Harvest 1982	1981	Indicated 1982	1981	Indicated 1982	Percent Change	1982 National Rank
Corn Grain	1,260	1,240	126	118	158,760	146,320	− 7.8%	12
Sorghum Grain	3,560	3,300	67	61	238,520	201,300	−16.0	2
Wheat	12,200	13,200	25	35	305,000	462,000	51.5	1
Soybeans	1,510	1,800	30	26	45,300	46,800	3.3	16
Oats	170	170	50	49	8,500	8,330	− 2.0	14
Barley	52	62	32	41	1,664	2,542	52.8	18

TABLE I. NATIONAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
A. INCOME MEASURES						
GROSS NATIONAL PRODUCT	BIL.'72$	(Q)	2ND	1478.4	-1.4	-2.1
DISPOSABLE PERSONAL INCOME	BIL.'72$	(Q)	2ND	1054.8	2.4	1.7
PERSONAL CONSUMPTION	BIL.'72$	(Q)	2ND	953.8	-5.4	-0.1
GROSS PRIVATE INVESTMENT	BIL.'72$	(Q)	2ND	201.0	39.1	-8.5
NET EXPORT OF GOODS & SERV.	BIL.'72$	(Q)	2ND	38.7	9.5	-12.4
PERSONAL SAVINGS	BIL.'72$	(Q)	2ND	149.4	144.3	40.2
SAVINGS RATE*	%	(Q)	2ND	6.9	1.6	1.6
B. LABOR FORCE						
CIVILIAN LABOR FORCE	MIL.	(M)	AUG	110.6	1.1	4.1
EMPLOYED	MIL.	(M)	AUG	99.8	1.2	0.9
UNEMPLOYED	MIL.	(M)	AUG	10.8	1.1	40.3
UNEMPLOYMENT RATES*						
ALL	%	(M)	AUG	9.8	0.	2.6
MEN	%	(M)	AUG	8.9	0.1	3.0
WOMEN	%	(M)	AUG	8.2	-0.2	1.5
TEENS	%	(M)	AUG	24.0	-0.1	5.2
BLACKS	%	(M)	AUG	14.6	-3.9	-0.4
WHITES	%	(M)	AUG	8.6	-0.1	2.5
C. PRODUCTION						
INDUSTRIAL PRODUCTION		(M)	JUN.	138.4	-8.6	-9.5
DURABLE PRODUCTION		(M)	JUN.	125.3	-10.4	-24.4
HOUSING STARTS**	TH.	(M)	JUL	1211.0	404.0	16.6
AUTO SALES		(M)	JUN.	6.8	-204.9	-9.3
D. PRICES						
1. CONSUMER PRICES						
CPI-W, ALL ITEMS	1967=100	(M)	JUL	291.8	7.0	6.3
CPI-U, ALL ITEMS	1967=100	(M)	JUL	292.2	2.2	6.5
FOOD	1967=100	(M)	JUL	288.6	36.0	4.5
HOUSING	1967=100	(M)	JUL	319.3	6.8	7.5
APPAREL	1967=100	(M)	JUL	188.7	-13.2	1.0
TRANSPORTATION	1967=100	(M)	JUL	297.9	20.9	6.6
MEDICAL	1967=100	(M)	JUL	328.1	6.2	11.0
2. PRODUCER PRICES						
ALL COMMODITIES	1967=100	(M)	AUG	300.4	-1.6	1.7
INDUSTRIAL COMMODITIES	1967=100	(M)	AUG	313.4	1.5	2.1
CRUDE MATERIALS	1967=100	(M)	AUG	320.5	-10.8	-3.8
CAPITAL EQUIPMENT	1967=100	(M)	AUG	281.4	2.1	5.1
3. AGRICULTURAL PRICES						
PRICES RECEIVED	1977=100	(M)	SEP	136.0	27.1	1.5
PRICES PAID	1977=100	(M)	SEP	156.0	0.	3.3
PARITY RATIO	1977=100	(M)	SEP	87.0	28.2	-2.2
E. BANKING AND FINANCE						
1. MONEY SUPPLY MEASURES						
M 1	BIL.$	(W)	SEP.4	458.2	-25.0	6.3
M2	BIL.$	(M)	JUN.	1906.9	5.94	9.5
2. MONEY SUPPLY COMPONENTS						
CURRENCY	BIL.$	(W)	SEP.4	131.0	22.1	8.2
TOTAL CHECKABLE DEPOSITS	BIL.$	(W)	SEP.4	322.9	-42.7	N/A
TOTAL TIME DEPOSITS	BIL.$	(W)	SEP/4	846.0	5.7	N/A

TABLE I. NATIONAL INDICATORS (CONT.)

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
E. BANKING AND FINANCE (CONT.)						
3. INTEREST RATES*						
PRIME RATE	%	(W)	SEP/4	13.5	0.	-6.3
DISCOUNT RATE	%	(W)	SEP/4	10.0	0.	-4.0
HOME MORTGAGE RATE	%	(M)	AUG	16.3	-0.4	1.7
90 DAY CD'S	%	(W)	SEP/4	10.4	-0.5	-5.6
3 MONTH T-BILLS	%	(W)	SEP/4	7.5	-0.5	-8.6

*NUMBERS IN PERCENT CHANGE COLUMN INDICATE ABSOLUTE CHANGE OF THE INDICATOR.

NOTE: PERCENT CHANGE COLUMN IN THIS TABLE INDICATES THE AVERAGE ANNUAL PERCENT CHANGE UNLESS INDICATED. ** INDICATES CHANGE IS NOT AT ANNUAL RATE.

TABLE II. GENERAL BUSINESS INDICATORS FOR KANSAS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MANUFACTURING						
AVERAGE WORK WEEK	HRS.	(M)	AUG	39.7	0.5	-1.5
AVERAGE WEEKLY EARNINGS	HRS.	(M)	AUG	349.0	0.3	6.4
INITIAL CLAIMS FOR UNEMPLOYMENT INSURANCE	TH.	(M)	AUG	20522.0	7.9	77.9
NEW INCORPORATIONS						
IN-STATE FOR PROFIT		(M)	AUG	316.0	3.3	-37.4
OUT-OF-STATE FOR PROFIT		(M)	AUG	157.0	98.7	40.2

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
KANSAS SECRETARY OF STATE

TABLE III. EMPLOYMENT AND INCOME IN KANSAS

INDUSTRY			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL INDUSTRIES	TH.	(M)	AUG.	912.4	-1.5	-3.5
MANUFACTURING	TH.	(M)	AUG.	164.4	-1.4	-11.5
DURABLE GOODS	TH.	(M)	AUG.	97.1	-2.0	-18.5
STONE, CLAY, GLASS	TH.	(M)	AUG.	6.3	1.6	-13.7
PRIMARY METALS	TH.	(M)	AUG.	2.7	-10.0	-25.0
FABRICATED METAL PRODUCTS	TH.	(M)	AUG.	11.1	1.8	-8.3
MACHINERY (INCL. ELEC.)	TH.	(M)	AUG.	27.5	0.7	-21.0
TRANSPORTATION EQUIPMENT	TH.	(M)	AUG.	38.9	-5.4	-20.8
AIRCRAFT AND PARTS	TH.	(M)	AUG.	30.3	-6.2	-27.5
OTHER DURABLE GOODS	TH.	(M)	AUG.	10.6	0.	-13.8
NONDURABLE GOODS	TH.	(M)	AUG.	67.3	-0.6	1.1
FOOD AND KINDRED PRODUCTS	TH.	(M)	AUG.	25.2	-1.2	7.2
MEAT PRODUCTS	TH.	(M)	AUG.	10.7	0.	15.1
APPAREL	TH.	(M)	AUG.	3.5	6.1	-2.8
PRINTING AND PUBLISHING	TH.	(M)	AUG.	15.8	-1.9	0.
CHEMICALS	TH.	(M)	AUG.	8.0	0.	-4.8
PETROLEUM AND COAL	TH.	(M)	AUG.	4.8	2.1	-4.0
OTHER NONDURABLE	TH.	(M)	AUG.	10.0	-1.0	-2.9
MINING	TH.	(M)	AUG.	18.0	0.	2.9
OIL AND GAS EXTRACTION	TH.	(M)	AUG.	15.9	0.	3.2
CONTRACT CONSTRUCTION	TH.	(M)	AUG.	38.8	-0.8	-12.0
TRANS., COMM., ELEC., GAS	TH.	(M)	AUG.	62.6	1.0	-4.3
WHOLESALE TRADE	TH.	(M)	AUG.	65.4	-1.4	-2.1
RETAIL TRADE	TH.	(M)	AUG.	160.2	0.3	-1.9

TABLE III. EMPLOYMENT AND INCOME IN KANSAS (CONT.)

INDUSTRY			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL INDUSTRIES (CONT.)						
FINANCE, INSURANCE, REAL EST.	TH	(M)	AUG.	48.3	-0.2	0.4
SERVICES	TH.	(M)	AUG.	180.1	0.	-0.3
FEDERAL GOVERNMENT	TH.	(M)	AUG.	26.0	0.	-2.6
STATE AND LOCAL GOVERNMENT	TH.	(M)	AUG.	145.4	0.3	-10.0
PERSONAL INCOME*	MIL.$	(Q)	2ND	27144.0	2.9	8.6

*PERCENT CHANGE COLUMN INDICATES AVERAGE ANNUAL RATE.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
BUREAU OF ECONOMIC ANALYSIS

TABLE IV. CONSUMER PRICES--KANSAS CITY
CPI FOR ALL URBAN CONSUMERS (CPI-U)

CATEGORY			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL ITEMS*	1967=100	(B)	JUN.	281.6	2.8	4.1
FOOD AND BEVERAGE	1967=100	(B)	JUN.	278.5	2.4	5.2
HOUSING	1967=100	(B)	JUN.	296.6	3.5	1.7
APPAREL AND UPKEEP	1967=100	(B)	AUG.	202.6	0.6	2.6
TRANSPORTATION	1967=100	(B)	JUN.	284.8	0.6	5.5
MEDICAL CARE	1967=100	(B)	JUN.	330.6	0.5	13.7

*ALL PERCENT CHANGES ARE FROM TWO MONTHS PREVIOUS.

SOURCE: BUREAU OF LABOR STATISTICS

TABLE V. EMPLOYMENT AND SALES DATA FOR KANSAS, STATE AND AREAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
KANSAS--STATEWIDE						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	1218.5	-0.4	-0.2
EMPLOYED	TH.	(M)	AUG.	1145.1	-0.9	-2.7
FARM	TH.	(M)	AUG.	71.4	-6.9	-9.0
UNEMPLOYED	TH.	(M)	AUG.	73.4	6.7	67.2
RATE*	%	(M)	AUG.	6.0	0.4	2.4
RETAIL SALES	MIL.$	(M)	AUG.	4413.7	1.4	295.7
WICHITA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	223.6	-0.4	-1.1
EMPLOYED	TH.	(M)	AUG.	201.7	-2.3	-7.2
FARM	TH.	(M)	JUL.	3.1	0.	-3.1
UNEMPLOYED	TH.	(M)	AUG.	21.9	21.0	146.1
RATE*	%	(M)	AUG.	9.8	1.7	5.9
RETAIL SALES	MIL.$	(M)	AUG.	234.0	5.2	0.1
KANSAS PORTION OF KANSAS CITY SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	280.0	0.3	3.6
EMPLOYED	TH.	(M)	AUG.	267.3	0.3	3.1
FARM	TH.	(M)	JUL.	1.7	0.	6.3
UNEMPLOYED	TH.	(M)	AUG.	12.7	-1.6	14.4
RATE*	%	(M)	AUG.	4.5	-0.1	0.4
RETAIL SALES	MIL.$	(M)	AUG	188.0	-4.0	-2.8
TOPEKA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	93.8	-0.4	0.
EMPLOYED	TH.	(M)	AUG.	88.4	-0.5	-1.2
FARM	TH.	(M)	JUL.	2.2	-4.3	-4.3
UNEMPLOYED	TH.	(M)	AUG.	5.4	0.	25.6

TABLE V. EMPLOYMENT AND SALES DATA FOR KANSAS, STATE AND AREAS (CONT.)

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
TOPEKA SMSA (CONT.)						
UNEMPLOYMENT RATE*	%	(M)	AUG.	5.8	0.1	1.2
RETAIL SALES	MIL.$	(M)	AUG.	87.4	5.6	13.0
LAWRENCE SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	32.7	2.2	-1.5
EMPLOYED	TH.	(M)	AUG.	31.2	2.6	-2.2
FARM	TH.	(M)	JUL.	0.	-100.0	-100.0
UNEMPLOYED	TH.	(M)	AUG.	1.5	-6.2	15.4
RATE*	%	(M)	AUG.	4.6	-0.4	0.7
RETAIL SALES	MIL.$	(M)	AUG.	24.3	1.8	1.2
RILEY COUNTY--MANHATTAN AREA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	19.5	-2.5	0.5
EMPLOYED	TH.	(M)	AUG.	18.6	-1.6	-0.5
FARM	TH.	(M)	AUG.	1.2	-7.7	0.
UNEMPLOYED	TH.	(M)	AUG.	0.9	-2.2	12.5
RATE*	%	(M)	AUG.	4.4	-0.3	0.3
RETAIL SALES	MIL.$	(M)	AUG.	16.6	2.1	5.7
RENO COUNTY--HUTCHINSON AREA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	31.2	-0.3	5.4
EMPLOYED	TH.	(M)	AUG.	29.4	-0.3	5.0
FARM	TH.	(M)	AUG.	1.5	-6.2	0.
UNEMPLOYED	TH.	(M)	AUG.	1.9	2.7	18.8
RATE*	%	(M)	AUG.	5.9	0.	0.5
RETAIL SALES	MIL.$	(M)	AUG	30.5	3.0	1.2
CRAWFORD COUNTY--PITTSBURG AREA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	16.3	-0.6	1.2
EMPLOYED	TH.	(M)	AUG.	15.2	-0.7	0.
FARM	TH.	(M)	AUG.	1.0	-5.0	-5.0
UNEMPLOYED	TH.	(M)	AUG.	1.2	9.1	33.3
RATE*	%	(M)	AUG.	7.0	0.6	1.4
RETAIL SALES	MIL.$	(M)	AUG.	12.3	5.1	0.3
LYON COUNTY--EMPORIA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	17.1	-2.3	-0.6
EMPLOYED	TH.	(M)	AUG.	16.2	-3.0	-2.4
FARM	TH.	(M)	AUG.	0.9	-10.0	-10.0
UNEMPLOYED	TH.	(M)	AUG.	0.9	12.5	28.6
RATE*	%	(M)	AUG.	5.0	0.6	1.0
RETAIL SALES	MIL.$	(M)	AUG.	16.3	10.2	13.5
SALINE COUNTY--SALINA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	26.3	-0.8	0.
EMPLOYED	TH.	(M)	AUG.	24.4	-0.4	-3.9
FARM	TH.	(M)	AUG.	0.8	-5.9	0.
UNEMPLOYED	TH.	(M)	AUG.	1.9	-5.0	58.3
RATE*	%	(M)	AUG.	7.2	-0.4	2.6
RETAIL SALES	MIL.$	(M)	AUG.	29.3	3.5	37.6
BARTON COUNTY--GREAT BEND AREA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	19.4	0.	5.4
EMPLOYED	TH.	(M)	AUG.	18.6	-0.5	5.1
FARM	TH.	(M)	AUG.	1.1	0.	0.
UNEMPLOYED	TH.	(M)	AUG.	0.8	6.7	100.0
UNEMPLOYMENT RATE*	%	(M)	AUG.	4.1	0.2	1.9
RETAIL SALES	MIL.$	(M)	AUG.	29.4	-0.3	-15.7

TABLE V. EMPLOYMENT AND SALES DATA FOR KANSAS, STATE AND AREAS (CONT.)

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MONTGOMERY COUNTY--COFFEYVILLE AREA						
CIVILIAN LABOR FORCE	TH.	(M)	AUG.	20.9	-0.9	-4.1
EMPLOYED	TH.	(M)	AUG.	18.4	-0.5	-12.8
FARM	TH.	(M)	AUG.	0.7	0.	0.
UNEMPLOYED	TH.	(M)	AUG.	2.5	-3.8	212.5
RATE*	%	(M)	AUG.	12.1	-0.2	8.4
RETAIL SALES	MIL.$	(M)	AUG.	17.7	1.7	-2.2

*ALL RATE CHANGES INDICATE ABSOLUTE CHANGES INSTEAD OF PERCENT.

NOTE: ALL RETAIL SALES FIGURES ARE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VI. KANSAS AGRICULTURAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
PRICES RECEIVED						
ALL FARM PRODUCTS	1967=100	(M)	AUG.	134.0	0.8	-48.3
ALL CROPS	1967=100	(M)	AUG.	116.0	-5.7	-54.0
WHEAT	$/BU.	(M)	AUG.	3.2	-2.7	-12.5
SORGHUM GRAIN	$/CWT.	(M)	AUG.	4.0	-7.0	-7.2
CORN	$/BU.	(M)	AUG.	2.5	-7.4	-24.7
SOYBEANS	$/BU.	(M)	AUG.	5.2	-13.3	-22.7
ALL HAY	$/TON	(M)	AUG.	51.0	-1.9	-3.8
LIVESTOCK AND PRODUCTS	1967=100	(M)	AUG.	145.0	3.6	-45.1
ALL BEEF CATTLE	$/CWT.	(M)	AUG.	38.4	-5.7	-9.4
STEERS AND HEIFERS	$/CWT.	(M)	AUG.	63.9	5.3	4.6
CALVES	$/CWT.	(M)	AUG.	64.0	0.2	-2.7
HOGS	$/CWT.	(M)	AUG.	59.3	2.4	22.5
MILK		(M)	AUG.	13.7	1.5	0.7
PRICES PAID						
HOG CONC. (38%-42%)	$/CWT.	(M)	AUG.	14.0	-5.4	-9.7
BEEF CATTLE CONC. (32%-36%)	$/CWT.	(M)	AUG.	10.6	-7.8	-7.8
MILK/FEED PRICE RATIO		(M)	AUG.	[illegible]	2.9	0.7
FARM INCOME	MIL.$	(Q)	1ST	N/A	N/A	N/A

SOURCES: FARM FINANCE, KCLRS
CROPS, KCLRS
LIVESTOCK ON FEED, KCLRS
BUREAU OF ECONOMIC ANALYSIS

TABLE VII. RETAIL SALES SUBJECT TO SALES TAX BY BUSINESS CLASSIFICATION*

BUSINESS CLASSIFICATION			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
APPAREL	MIL.$	(M)	AUG.	31.8	5.0	4.2
AUTOMOTIVE	MIL.$	(M)	AUG.	213.0	0.5	4.4
FOOD	MIL.$	(M)	AUG.	291.2	10.2	9.4
FURNITURE	MIL.$	(M)	AUG.	45.4	-2.0	-1.7
GENERAL MERCHANDISE	MIL.$	(M)	AUG.	179.1	12.5	11.4
LUMBER & BUILDING MATERIALS	MIL.$	(M)	AUG	89.0	8.2	-2.3
PROF. & PERSONAL SERVICE	MIL.$	(M)	AUG.	57.5	2.4	18.2
PUBLIC UTILITIES	MIL.$	(M)	AUG.	61.9	2.9	11.5
UNCLASSIFIED	MIL.$	(M)	AUG.	111.6	4.0	3.2
FARM AND GARDEN PRODUCTS	MIL.$	(M)	AUG	1.0	6.7	-1.0
MANUFACTURING AND TRADING	MIL.$	(M)	AUG.	81.2	-1.1	21.0
MISCELLANEOUS	MIL.$	(M)	AUG.	3.5	-43.9	54.8
TOTAL	MIL.$	(M)	AUG.	1166.0	5.3	4.7

*ALL FIGURES ARE THE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VIII. BANKING AND FINANCIAL ACTIVITY IN KANSAS

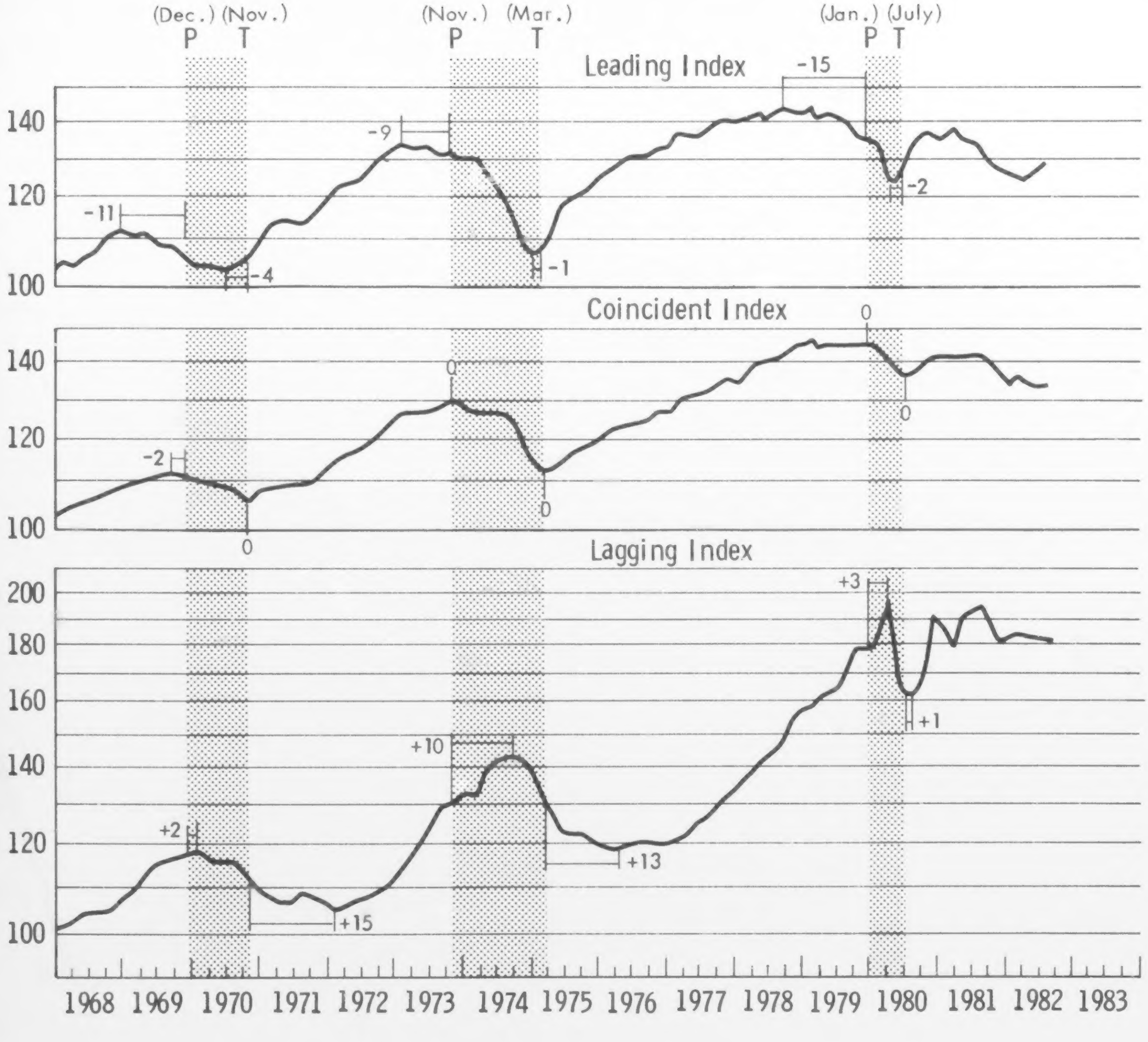
AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MEMBER COMMERCIAL BANKS						
STATEWIDE						
TOTAL LOANS	MIL.$	(M)	AUG.	4100.0	-0.1	8.9
TOTAL DEPOSITS	MIL.$	(M)	AUG	6798.0	19.8	7.2
DEMAND DEPOSITS	MIL.$	(M)	AUG.	1700.0	-0.5	-2.0
TIME AND SAVINGS	MIL.$	(M)	AUG.	5098.0	0.8	10.7
KANSAS CITY, KANSAS*						
TOTAL LOANS	MIL.$	(M)	AUG.	203.4	-1.2	3.2
REAL ESTATE	MIL.$	(M)	AUG.	22.3	-8.6	23.9
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	AUG.	56.4	1.8	10.6
CONSUMER	MIL.$	(M)	AUG.	41.6	1.5	-11.5
TOTAL DEPOSITS	MIL.$	(M)	AUG.	325.6	-1.1v	1.4
DEMAND DEPOSITS	MIL.$	(M)	AUG.	92.3	-1.6	-6.8
TIME AND SAVINGS	MIL.$	(M)	AUG.	233.3	-0.9	5.1
TOPEKA*						
TOTAL LOANS	MIL.$	(M)	AUG.	276.6	0.9	9.0
REAL ESTATE	MIL.$	(M)	AUG.	50.1	0.2	13.9
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	AUG.	136.6	1.2	20.9
CONSUMER	MIL.$	(M)	AUG.	48.5	2.3	18.3
TOTAL DEPOSITS	MIL.$	(M)	AUG.	419.7	6.2	-5.9
DEMAND DEPOSITS	MIL.$	(M)	AUG.	149.6	4.4	-9.9
TIME AND SAVINGS	MIL.$	(M)	AUG.	270.2	7.3	-3.5
WICHITA*						
TOTAL LOANS	MIL.$	(M)	AUG.	812.1	0.5	10.6
REAL ESTATE	MIL.$	(M)	AUG.	112.1	-0.5	-2.5
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	AUG.	380.7	0.7	20.9
CONSUMER	MIL.$	(M)	AUG.	222.5	1.0	2.1
TOTAL DEPOSITS	MIL.$	(M)	AUG.	1189.4	2.0	4.2
DEMAND DEPOSITS	MIL.$	(M)	AUG.	463.0	-0.1	1.1
TIME AND SAVINGS	MIL.$	(M)	AUG.	726.5	3.4	6.2
SAVINGS AND LOANS--STATEWIDE						
LOANS MADE	MIL.$	(M)	JUL.	44.4	-63.6	-35.0
NET GAIN IN SAVINGS**	MIL.$	(M)	JUL.	-15.5	6.8	40.3
SAVINGS AND LOANS--CITIES						
KANSAS CITY, KANSAS						
LOANS MADE	MIL.$	(M)	JUL.	4.6	-13.2	-58.2
NET GAIN IN SAVINGS**	MIL.$	(M)	JUL.	-7.7	-4.4	-0.9
TOPEKA						
LOANS MADE	MIL.$	(M)	JUL.	5.2	-24.6	-53.6
NET GAIN IN SAVINGS**	MIL.$	(M)	JUL.	-5.1	8.6	7.3
WICHITA						
LOANS MADE	MIL.$	(M)	JUL.	8.7	-31.5	-51.1
NET GAIN IN SAVINGS**	MIL.$	(M)	JUL.	0.7	4.8	15.8

*ONLY LARGE COMMERCIAL BANKS ARE INCLUDED.

**NUMBERS IN PERCENT CHANGE COLUMNS INDICATE ABSOLUTE CHANGE.

COMPOSITE INDEXES

1967 = 100



The University of Kansas
Kansas Business Review
September-October 1982 Vol.6 No.1

Published bimonthly by the University
of Kansas, The Institute for Economic
and Business Research, Lawrence, Kansas 66045

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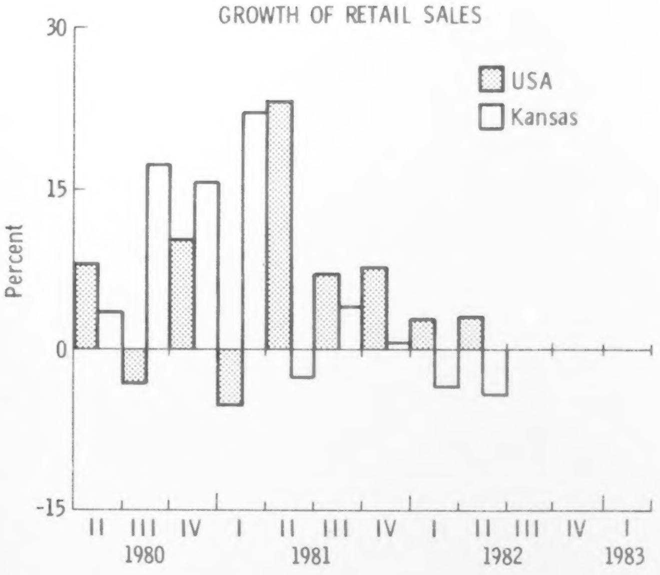

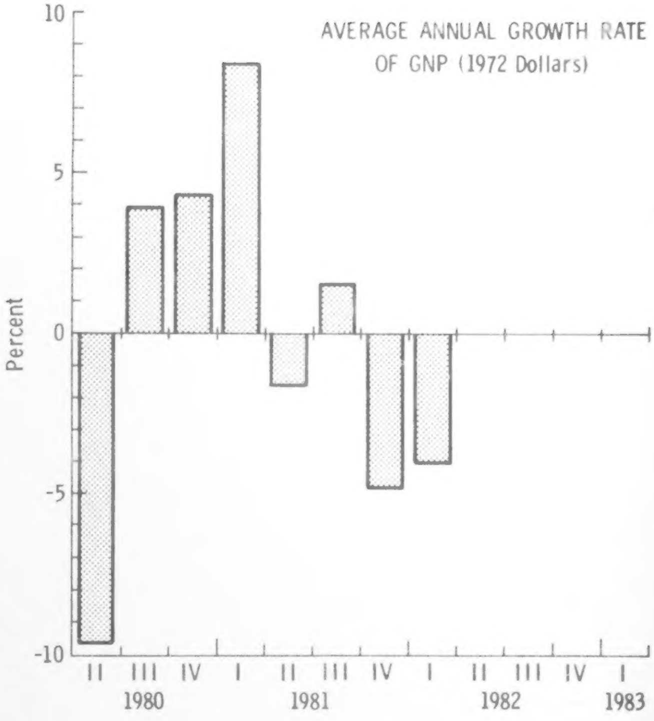

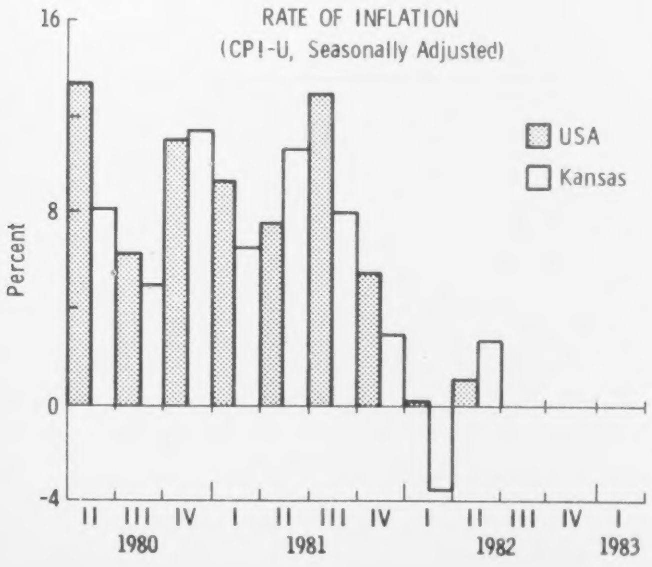

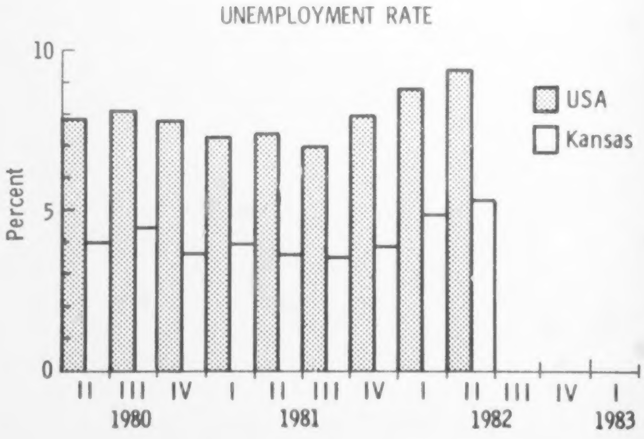

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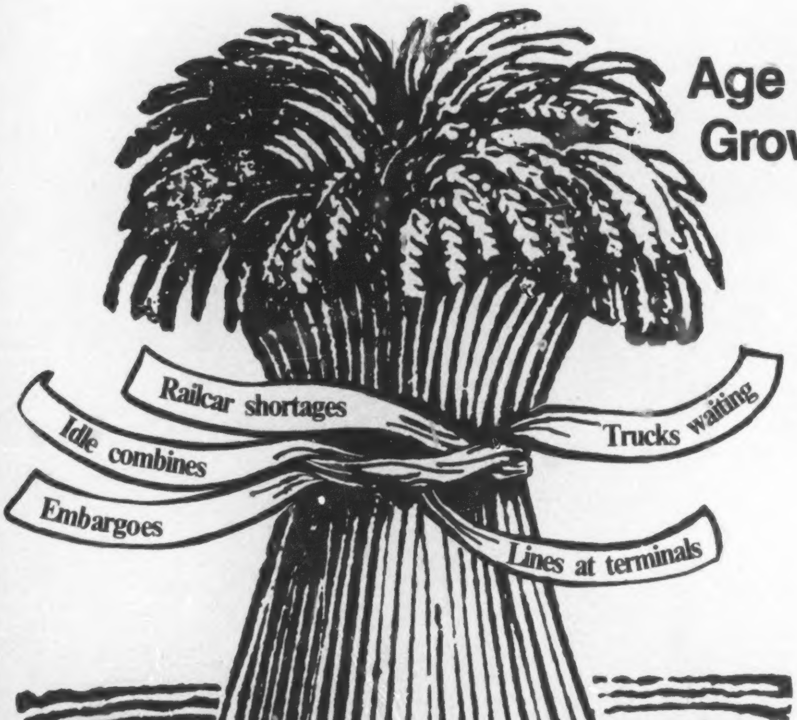
Michael W. Babcock
L. Orlo Sorenson
Wade German

Age Structure and the Growth of the Kansas Economy

Robert Glass

Economic Conditions
Economic Indicators


Railcar shortages
Idle combines
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Institute for Economic and Business Research, The University of Kansas

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Kansas Business Review (KBR) is published five times a year. KBR is published by the Institute for Economic and Business Research, 319 Raymond Nichols Hall, The University of Kansas, Lawrence, Kansas 66045. It is designed by the Division of Publications, Office of University Relations.

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Wheat Market Bottlenecks
An Economic Diagnosis and Prescription

Michael W. Babcock
L. Orlo Sorenson
Wade German

Dr. Babcock is an Associate Professor in the Department of Economics at Kansas State University. Dr. Sorenson is a Professor of Agricultural Economics at Kansas State University. Mr. German is Director of Commercial Systems for the Union Pacific Railroad. The authors note that the research results reported in the following article are drawn from *Improving Production Area Logistics for Wheat* which was funded by a grant from the Special Grants Program, Science and Education Administration, the U.S. Department of Agriculture.

Introduction

Bottlenecks in the wheat logistics system—the system of storing and transporting wheat from the point of harvest to its final destination—have been with us for nearly a century. Despite extensive study by the ICC and Congress, little progress has been made in identifying the principal causes of imbalances in the logistics system. Each year, any or all of the following problems hamper the storage and distribution of Kansas wheat.

1. Idle combines waiting in the fields for trucks to return from the elevator.
2. Long lines of trucks at country elevators awaiting the opportunity to unload.
3. Wheat stacked on the ground.
4. Long lines of trucks and rail cars at terminal elevators awaiting the opportunity to unload.
5. Embargoes on further shipments to terminal elevators.
6. Rail car shortages or surpluses.

Historically, disequilibrium in the wheat logistics system has been attributed primarily to railroads. In this view, bottlenecks are caused either by poor railroad management or by their decision to serve other markets. Given this view of the problem, the political process is viewed as a solution. While railroad managerial decisions or errors may contribute to system disequilibrium, the view that they are the primary cause is incorrect.

Railroads are part of a highly interdependent system of storage and distribution, composed of several subsystems each under a separate management. Each subsystem has its own goals. However, attainment of these goals is dependent on the actions of others in the logistics system. Functional subsystems include the following.

1. Harvesting and local elevator delivery (farms).
2. Local receiving, storing, and shipping (local elevators).
3. Transportation (railroads and trucks).
4. Inland terminal receiving, storing, and shipping (terminal elevators and processors).

Equilibrium within the system requires that demands for storage and transportation at all points in the system be equal to the available supply of these services at any point in time. Optimum or equilibrium conditions exist when:

1. The rate of wheat flowing from farms just matches the ability of the local elevator to receive wheat.
2. The amount of wheat seeking storage at local elevators is just equal to the available space at local elevators plus that which can be shipped for storage to an inland terminal elevator during harvest.
3. Rail cars and trucks available for movement of grain from local elevators to terminal or processing facilities just match the quantity and timing of demand for transport services.
4. The rate and quantity of grain arriving for entry into inland terminal elevators just matches the ability of the terminal to receive grain for storage or to merchandise the grain for further movement along the marketing channel.[1]

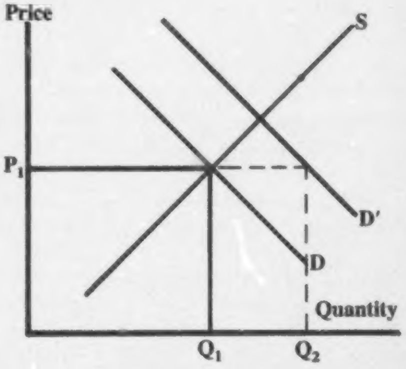
These conditions, however, are seldom achieved as evidenced by the nearly annual occurrence of bottlenecks. The major causes of logistic system imbalance are the following.

1. Price rigidity in the storage and transport markets.
2. Wheat market information gaps.
3. Substantial unpredictable variation in demand for storage and transport.

Price Rigidity, Information Gaps, and System Imbalance

The primary function of prices in a market system is to allocate resources. When demand increases, the increased price provides the producers with the incentive to expand production. However, when prices are inflexible, they cannot perform their allocative function, and shortages or surpluses occur.

For example, suppose that the following diagram represents the market for elevator storage or truck transport. Suppose that the market is initially in equilibrium at price P_1 and quantity Q_1. Let this figure represent the off-peak equilibrium.



Now assume that when harvest occurs, demand increases to D'. If the price is flexible, it would increase to bring supply and demand into balance. In Kansas, however, both storage prices and transport rates are inflexible in the short run, creating a shortage. When demand increases to D', the quantity demanded at price P_1 becomes Q_2. However, the quantity supplied at that price is only Q_1. Thus, a shortage of $Q_2 - Q_1$ occurs.

In Kansas, elevator storage prices are fixed for the duration of the license year. The Warehouse Division of the Kansas Grain Inspection Department establishes maximum and minimum storage rates for elevators seeking a state grain storage license. The elevator chooses a rate within the given range. The selected storage price is fixed for the license year which begins June 1. Similar procedures exist for elevators seeking a grain storage license from the federal government.

However, even in the absence of regulation, it is possible that elevators would not raise prices during wheat harvest. Since farm storage is a close substitute for elevator storage, potential competition may inhibit elevator storage price increases.

Truck rates on intra-Kansas grain movements are regulated. Thus, truck rates cannot change to equate supply and demand when a significant change in market conditions occurs. However, if truck rates are deregulated, it is unlikely that they would increase at harvest because the harvest period transport market is very competitive. Trucking firms that do not normally haul grain can easily adapt their equipment to move grain cargoes during a period of high demand. Also, the trucking industry faces strong competition from railroads. Peak season price increases are not likely to occur in this environment.

Railroads have had the authority to enact peak-season pricing since 1976; however, no railroad serving Kansas has exercised this option. The likely reason is a price elastic demand for rail transport. (The elasticity of demand measures the percentage change of rail traffic in response to a given percentage change in rail rates.) If demand is price elastic, the revenue-increasing effect of a price increase is more than offset by a decline in traffic, resulting in lower total revenue.

A number of empirical studies indicate an elastic demand for service of individual railroads. One study of the Oklahoma wheat market placed the rail elasticity of demand between −1.02 and −3.7.[2] A study of the west Kansas, Oklahoma, and Texas wheat market concluded that rail demand is price elastic. When only the dominant railroad in the area raises rates by 10 percent (while other railroads and trucks hold rates constant), the own-price elasticity of demand for the dominant railroad ranges from −1.2 to −8.7 (−5.6 for the region).[3] Cross-price elasticities with respect to other railroads range from 1.7 to 3.8 (2.9 for the region).[4]

Local imbalances of storage and transport could be avoided if wheat market information were available to allow elevators and transport firms to forecast demand changes. For example, elevators could avoid shortages or surpluses of storage space through appropriate pre-harvest planning. To make the appropriate amount of space available, elevators need to know the following.

1. Local area wheat production.
2. Proportion of local area wheat production to be stored on the farm.
3. The timing of wheat harvest receipts.
4. Availability of harvest period transportation.

Unfortunately, all of these information needs are either unavailable or difficult to forecast accurately.

Railroads could avoid shortages or surpluses by accurately forecasting the amount of wheat to be transported between various origins and destinations. The information that would make this possible, such as local wheat production estimates or export forecasts by port, however, is not readily available.

Table 1
Percentage Temporal Distribution of Wheat Receipts Selected Kansas Elevators

Year	Jan.-May	June-Aug.	Sept.-Dec.
	East Area Elevators		
1975	3.4	92.3	4.2
1976	3.3	94.9	1.8
1977	3.3	89.8	6.7
1978	19.6	76.3	4.0
1979	3.7	92.8	3.4
	Central Area Elevators		
1975	1.5	97.1	1.1
1976	3.2	95.7	1.1
1977	4.5	93.3	2.2
1978	4.6	89.1	6.3
1979	4.1	94.5	1.2
	West Area Elevators		
1975	3.4	93.1	3.5
1976	4.6	92.5	2.9
1977	4.1	92.3	3.6
1978	7.9	87.0	5.0
1979	4.2	88.1	7.7

Seasonal Variation in Demand for Storage at Kansas Country Elevators

The demand for storage at Kansas country elevators exhibits a sharp peak at harvest, often resulting in disequilibrium in the storage subsystem. Table 1 displays the percentage time distributions of wheat receipts for a sample of Kansas country elevators in the years 1975-1979. Each row in the table represents the time distribution of wheat receipts for a given year and adds to 100 percent.

Table 1 reveals the sharp peak of wheat receipts during the harvest season. The peak month is either June or July at every location and in every year. On the average, 75-100 percent of the wheat receipts at country elevators occur at harvest with more than 90 percent for a large number of cases. While the Table groups the receipts into three seasons with harvest encompassing the June-August period, the typical country elevator obtains a majority of its receipts in a two to three week period in June-July.

The high-peak demand for wheat storage during the harvest season produces short-run disequilibrium in the storage submarket of the logistics system, and the subsequent market imbalance inflicts costs upon farmers. These costs result from congestion at the local elevator produced by the high-peak demand for storage. During the harvest season, long lines form at elevators, and capital and labor are idle while waiting in the line. This idle capital and labor have a high opportunity cost at harvest when resources are needed to harvest and transport grain from farms to elevators. Because modern combines must unload their hoppers approximately every half hour to avoid interrupted harvesting, farm trucks waiting to unload at the elevator impose the opportunity cost of the idle combine.

Also, delays in harvesting wheat may result in weather-related crop losses. For example, if congestion at the elevator delays harvest, a crop may be destroyed by hail or wind in a single day. Unharvested wheat is also susceptible to loss in value due to shattering, loss of weight, and loss in quality due to bleaching.[5]

Peak-period congestion at harvest also inflicts costs on elevators. Inevitably, additional labor must be obtained and/or the permanent labor force must work overtime. These costs would not occur if receipts were evenly distributed over time. Also, elevator managers naturally wish to ship wheat during the harvest season to make space available for the harvest receipts; however, they may be unable to do so as a result of transport unavailability or congestion at terminals. If the excess grain is then stacked on the ground, it is subject to mold damage or insect infestation. Should the elevator manager choose not to do this, he will lose storage revenue to farm storage.

Storage market disequilibrium could be reduced through appropriate planning if elevator managers knew the precise timing of peak receipts as knowledge of the timing of receipts with sufficient lead time would allow the manager to ship wheat to other destinations. Unfortunately, the timing of receipts is unpredictable. The manager knows that the harvest

Table 2
Percentage Change in Annual Wheat Receipts From Previous Year* Selected Kansas Elevators

	Elevator						
Year	**A**	**B**	**C**	**D**	**E**	**F**	**G**
			East Area Elevators				
1976	12.3%	-15.6%	NA	111.0%	49.0%		
1977	-29.6	26.8	-18.6%	-8.0	-48.2		
1978	-1.3	-59.4	-37.1	-47.4	-43.4		
1979	42.9	155.1	51.1	120.8	110.0		
			Central Area Elevators				
1976	-18.4	3.0	NA	NA	NA	-14.5	-14.1
1977	13.6	-52.8	-28.1	-11.8	-0.2	25.4	26.9
1978	-21.8	-2.7	-4.5	-21.4	-28.6	-17.5	-7.0
1979	31.7	28.1	-11.7	19.7	54.5	37.5	24.8
			West Area Elevators				
1976	-57.2	0.7	-36.6	NA	22.5	29.8	-5.9
1977	9.6	-0.1	0.7	176.0	-30.5	-18.4	-13.1
1978	11.4	-14.8	-41.4	-69.0	-29.8	-3.2	-31.9
1979	39.8	-23.1	87.1	68.8	73.5	70.6	50.1

* Receipts in (000) bushels

receipts will occur in the June-July period. However, the distribution of receipts within this period is highly variable and dependent on random weather patterns.

Annual Variation of Demand for Storage at Kansas Country Elevators

There is substantial, unpredictable inter-year variation in demand for storage at Kansas country elevators. The significant annual shifts in demand make it difficult for elevators to appropriately adjust supply, and this difficulty would exist even if prices were flexible since it takes time to make the necessary resource adjustments.

Table 2 contains annual wheat receipts for a sample of Kansas country elevators for the years 1975-1979. An analysis of Table 2 indicates a very high degree of inter-year variation in wheat receipts in all areas of Kansas—both absolute and percentage changes in receipts are quite large. In the East Area, there are four cases of receipts more than doubling in a single year. Many of the elevators in the sample exhibited a roller coaster pattern of alternating increases and decreases in receipts. One of the elevators with the greatest variation in receipts was West Area Elevator D. Receipts increased 176 percent in 1977, then collapsed by 69 percent in 1978, only to recover by 69 percent in 1979.

A firm will be able to quickly adjust production to a changing demand if most of its costs are variable. By definition, a variable resource is one which can be changed as short-run output changes. Unfortunately, elevators have a high proportion of fixed costs. One study placed the country elevator proportion of fixed costs between 58 percent and 68 percent of total costs.[6] This inflexibility makes it difficult for elevators to adjust to large annual changes in demand.

Storage market imbalance resulting from large annual demand change could be reduced by investment in standby storage. In years of above "normal" receipts, an elevator could temporarily store grain in standby capacity until excess wheat is marketed to other locations. An analysis of the benefits and costs of standby storage (steel tanks), however, indicates that it is unprofitable. If the standby storage is needed for a period of four months once every five years, the fixed costs over the five-year period are nearly nine times greater than the storage revenue.[7]

The substantial annual variation in demand for storage is apparently unpredictable. If this were not the case, storage market imbalance could be reduced by appropriate planning. One would think that local elevator receipts are highly correlated with local production, but an analysis of individual elevator wheat receipts and county wheat production revealed a weak positive correlation.[8]

Seasonal Variation in Demand for Wheat Transport

The harvest period peak demand for both rail and truck transport of wheat also produces disequilibrium in the transport submarket of the wheat logistics system. It also inflicts costs on transport firms that would not occur if the demand for transport was uniform over time.

Table 3 contains quarterly Kansas wheat carloadings by four major railroads over the period 1978-1981. The data in Table 3 reveal a substantial degree of carloading variation within a given year. In general, carloadings are high during the third quarter, due to the high-peak demand for transport during the harvest period. For the four railroads combined, the ratios of highest to lowest quarterly carloadings within a year are as follows: 1978—2.38; 1979—3.24; 1980—1.91; and 1981—1.53.

The variation in seasonal demand is even greater for some of the individual railroads. For example, Railroad A experienced percentage seasonal variations in excess of 100 percent in all the years 1978-1981. The ratios of highest to lowest quarterly carloadings were as follows: 1978—2.85; 1979—3.49; 1980—2.35; and 1981—2.34.

The greatest seasonal variation in demand was experienced by Railroad C in 1979. Third quarter carloadings were nearly four times greater than those of the first quarter.

Table 4 contains monthly truck wheat receipts at Kansas City for the period 1977-1981. The data reveal the significant seasonal variation in demand for truck transport. The peak month is July in every year; however, there is variation in the proportion of total truck receipts occurring in July. The percentages range from a low of 11.2 percent in 1978 to a high of 27.9 percent in 1979.

Additional insight to the degree of seasonal variation can be obtained by comparing July receipts to the lowest monthly receipts in each year. The ratios of July receipts to lowest monthly receipts in each year are as follows: 1977—5.3; 1978—4.2; 1979—5.8; 1980—6.4; and 1981—4.9. Thus, harvest time truck wheat demand is four to six times greater than demand at off-peak times of the year.

The peak demand for transport during wheat harvest produces additional costs for railroads serving the market. It is physically impossible to supply rail cars to all points which simultaneously exhibit a peak demand. If the railroad decides to serve only the demand it can accommodate with its own capacity, it may lose traffic to rival firms. If the firm leases additional rail cars to serve the peak demand, the additional cost is the *per diem* payments on the leased cars.

Most of the wheat movements at harvest time are from country to terminal elevators. As a result, terminal elevator receiving areas become congested producing lengthy unloading periods for rail cars and trucks. The cost to the transport firm is the opportunity cost of the idle capital and labor, which, as noted, is quite high during harvest periods. It is also the case that firms serving markets with peak demands often suffer significant equipment underutilization and higher average costs than would be the case with temporally uniform demand.[9]

Although the above-cited costs are inherently associated with peak transport demands, they could be mitigated somewhat by effective planning. For example, if a railroad knew the peak shipping season of each elevator on its line, it could allocate its car fleet accordingly. However, the unpredictability of the peak demand season makes this very difficult. For example, in 1975 an east Kansas elevator shipped 95 percent of its total wheat shipments during harvest. The next year harvest period shipments were only 56 percent of total shipments.[10] Past experience, therefore, is not a reliable predictor.

Annual Variation in Demand for Wheat Transport

Substantial annual variation in the demand for wheat transport produces disequilibrium in the transport submarket of the wheat logistics system. Substantial unpredictable demand shifts make it difficult for transport firms to adjust capacity to the volatile demand because it takes time to adjust the stock of capital.

An examination of Table 3 reveals substantial annual variation in wheat carloadings. For the four major railroads, Kansas wheat carloadings increased by 20.6 percent and 2.5 percent in 1979 and 1980. However, almost the entire gain was lost in 1981. Railroad A exhibited greater annual variation than the group while Railroad B had relatively small annual variation.

The data in Table 4 reveal substantial annual variation in demand for truck transport. Truck wheat receipts at Kansas City posted large consecutive gains in 1978 and 1979 of 30.6 percent and 52.7 percent. Receipts declined by 14 percent in 1980 but rebounded by a nearly identical percentage in 1981.

Table 3
Quarterly Kansas Wheat Carloadings 1978-1981
Four Major Railroads Serving Kansas

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Total Percent Change
			Railroad A			
1978	3239	5921	9239	4164	22563	
1979	3704	5423	12941	6450	28518	26.4
1980	5719	4536	10667	6769	27691	- 2.9
1981	7611	3484	6230	3250	20575	-25.7
			Railroad B			
1978	5745	8515	9901	5982	30143	
1979	5495	6514	12281	7578	31868	5.7
1980	6743	8017	10385	8670	33815	6.1
1981	10325	6851	10274	7544	34994	3.5
			Railroad C			
1978	9297	10859	24488	15907	60551	
1979	8906	14239	35233	17867	76245	25.9
1980	15968	15069	31107	14123	76267	0
1981	14930	14149	17503	11377	57959	-24.0
			Railroad D			
1978	766	1185	1730	1188	4869	
1979	1201	1406	2097	1106	5810	19.3
1980	2004	1254	3089	1895	8242	41.9
1981	1066	504	1320	841	3733	-54.7
			Four Railroad Total			
1978	19047	26480	45358	27241	118126	
1979	19306	27582	62552	33001	142441	20.6
1980	30434	28876	55248	31457	146015	2.5
1981	33934	24988	35327	23012	117261	-19.7

While railroad managerial decisions or errors may contribute to system disequilibrium, the view that they are the primary cause is incorrect.

Railroads have a difficult time adjusting supply to changing demand because they have a high proportion of fixed costs. The cost of rail cars and right-of-way is fixed and independent of the amount of ton miles. Also, there is no major alternative harvest-time use for the covered hopper car. These limitations inhibit rail supply flexibility in response to demand change.

The annual variation in transport demand is apparently unpredictable. One would think that wheat transport demand is highly correlated to wheat exports. A comparison of Kansas quarterly wheat carloadings to quarterly Gulf export inspections of hard red winter wheat, however, reveals a correlation coefficient of only .26 (1978-1981).

Quarterly truck wheat receipts at Kansas City were also compared to Gulf wheat exports. For the period 1977-1981, the correla-

Table 4
Monthly Truck Wheat Receipts at Kansas City—1977-1981*

Month	1977	1978	1979	1980	1981
January	960.4	654.2	1940.1	1900.7	2430.6
February	1183.7	976.8	2024.6	2000.8	1941.5
March	1297.8	1592.9	2321.8	1698.9	2265.3
April	991.8	2592.3	2065.6	1473.8	2409.4
May	1115.9	2646.8	2745.9	1320.7	1924.9
June	2158.2	2495.3	2488.2	2463.5	3326.7
July	3809.6	2766.6	10400.4	8399.3	8342.8
August	2250.5	2151.7	4787.4	3319.5	3405.2
September	2072.5	2157.6	2679.9	3164.7	4273.7
October	1156.0	1906.4	1859.8	2569.7	2752.3
November	948.5	2007.3	2119.8	1804.7	1723.3
December	723.1	2430.6	1783.4	1874.8	1703.1
Total	18668.1	24378.7	37217.0	31991.2	36498.8

* Receipts are (000) bushels

tion coefficient between the two variables is only .32.

Transport Supply Response to Variable Transport Demand

Clearly, Kansas wheat transport demand exhibits substantial unpredictable seasonal and annual variation, and, as such, the question arises as to the nature of transport supply response to variable demand. In the short run (a few months), the size of a given railroad's car fleet is fixed. However, if demand increases, the railroad may supplement its fleet by leasing rail cars from other railroads or car leasing companies. If demand decreases, a railroad has no flexibility in the short run, largely because the hopper car has no major alternative harvest-time use. The motor carrier industry, on the other hand, can respond to demand change more quickly than railroads, due to a high proportion of variable costs, low barriers to entry, and equipment flexibility.

A personal interview survey of fifteen large Kansas grain trucking firms was conducted in the fall of 1981. One of the survey's main objectives was to determine how the trucking industry responds to the peak demand for transport at harvest. According to the survey, the following types of adjustments occur.

1. The given trucking capacity is used more intensively. Trucks are operated seven days a week, sixteen hours a day.
2. Trailers not normally used to haul grain can be adapted at low cost to transport grain when demand increases.
3. Grain trailers normally used to haul fertilizer are shifted to grain transport during harvest.
4. Local trucking supply is supplemented by trucking firms that follow the harvest.
5. If local trucking firms cannot handle all the harvest period demand, other firms familiar to local trucking firm managers are called in.

This study's major conclusion is that bottlenecks in the wheat logistics system are not primarily due to avoidable managerial error.

The longer the period of time, the greater the supply response to a change in demand. Over the period 1978-1981, investment in covered hopper cars (by railroads serving Kansas) was about proportional to the growth of demand for rail transport of Kansas wheat over the period 1977-1980.[11] If demand for transport should decline over a five-year period, railroads would have little downward flexibility because rail cars are durable goods and have a long serviceable use life. An individual railroad could sell excess rail cars, but they would remain in the national fleet for a long time.

The supply of grain trucking in Kansas appears to be quite responsive to rate increases. Estimated price elasticity of supply, based on 1977-1981 Kansas data, is 2.2.[12] As well, equipment investment over the period 1977-1981 by a sample of fifteen large Kansas grain trucking firms was about proportional to the growth of truck wheat transport demand over that period.[13]

It is imperative that more information be shared among the participants in the wheat logistics system.

Conclusions and Recommendations

This study's major conclusion is that bottlenecks in the wheat logistics system are not primarily due to avoidable managerial error. Instead the major causes are the following.

1. Significant, unpredictable variation in short- and long-run demand for storage and transport.
2. Price rigidity in both the storage and transport markets.
3. Wheat market information gaps.

Cause (1) refers to unpredictable, random market factors beyond the control of firm management. Investment in safeguards against demand fluctuation is unprofitable. Cause (2) is due, in part, to regulation, but, even if storage and transport prices were deregulated, peak-season prices would likely not occur due to price elastic demand for storage and transport. Thus, it appears that causes (1) and (2) are not amenable to solution. However, information gaps can be reduced.

For example, government forecasts of wheat production need to be more localized. A forecast of wheat production for the entire state is of little use to individual elevators, nor are forecasts of total U.S. wheat exports of much use to railroads. Because individual railroads serve different regions which produce different wheat varieties that are exported through different ports, forecasts by port area would be most useful.

Also, it is imperative that more information be shared among the participants in the wheat logistics system. For example, farmers and local elevators should frequently discuss marketing and investment plans, local grain production estimates, and availability of local elevator space. Elevators and transport firms should discuss equipment investment plans, local grain production estimates, and expected harvest period transport requirements.

This study's research also argues that a stable export policy is needed. Obviously, selective embargoes inject another element of uncertainty into what is already a very unstable market. Lastly, the Staggers Act of 1980 gave railroads and shippers the authority to enter into contracts, and minimum annual volume agreements could be one method to reduce some of the demand uncertainty.

Footnotes

[1] Warren Meyer, *An Economic Study of System Stresses on the Storing and Transportation of Kansas Wheat During Harvest*, Unpublished M.S. Research Report, Kansas State University, 1978, p. 30.

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[9] Whipple, G.D., Casavant, K.L. and Mittelhammer, R. "An Evaluation of State Regulation of Primary Agricultural Motor Carriers in Washington," *Proceedings—Twenty-second Annual Meeting—Transportation Research Forum*, 1981, p. 31.

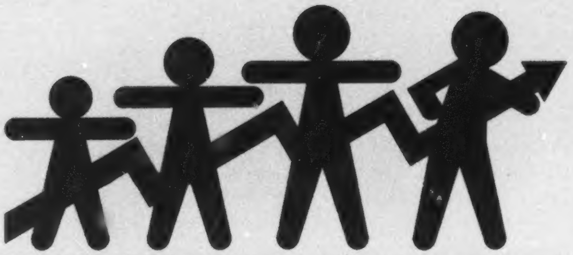
[10] Babcock and Sorenson, p. 92.

[11] *Ibid*, pp. 152-155.

[12] *Ibid*, p. 167.

[13] *Ibid*, p. 170.

Age Structure and Economic Growth in Kansas



Robert Glass

Mr. Glass is a Research Assistant for the Institute for Economic and Business Research. He received his MA in Economics at the University of Kansas and is currently enrolled in the Ph.D. program in the KU Department of Economics.

Introduction

A perpetual concern to Kansans is the issue of economic development in the state. In general, Kansas citizens and policymakers seem divided as to whether slow, moderate growth—put forward by some proponents as a program for a responsive *status quo*—or rapid, aggressive development should be the future path for the state's economy. However, no matter the policy to be followed, certain "facts of life" will significantly influence the direction of the state's economy, particularly so if they are left to evolve and impact without policy interference. In Kansas, one of the most important factors is the state's demographic structure. This article will use some of the recently released data from the *1980 Census* to focus on one aspect of the demographic structure of Kansas: the age of the Kansas population.

The age of a population can be measured in several ways. In this study, because of the concern with the economic implications of age, the primary analytic instrument will be the distribution of the population within several age categories. Specifically, the age categories to be used are 0 to 19 years of age, 20 to 34, 35 to 49, 50 to 64, and 65 and above. By measuring the "frequency" of persons in each of these categories relative to the total population, a picture of the age structure of a particular area emerges.

To provide a relevant context to this analysis, the national age structure along with the age structures of states close to Kansas will also be reviewed. Following the analysis of the age structure of Kansas and a discussion of its economic implications for the state as a whole, an intrastate regional analysis of Kansas's age structure is undertaken. Several different types of regional divisions are used to identify the opportunities and limitations posed by the age structure to an area's economy. However, prior to the comparative and area-specific analyses, this article examines, in general, the relationship of age structure to current economic problems. This discussion precedes the analyses proper for two reasons: first, to indicate the extent to which age structure can influence economic matters, and, second, to suggest the essential character of the impact that age structure has on the economy.

The Influence of Age Structure on the Economy

The importance of age structure can be appreciated by reviewing two of the issues which dominated discussion in the recent mid-term elections: social security and unemployment. The concern with social security was focused on the old age and survivors' benefits part of the system. Partially accounting for the problematic nature of this issue is the general misunderstanding that the old age and survivors' benefits program is similar to an insurance or pension plan. The fact is that this program has not been run like an insurance or pension plan for many years, and it is questionable whether it was ever intended to be run that way. Instead, the program is simply a welfare program for the old, an intergenerational transfer of wealth from those under 65 to those over 65. However, from 1940 to 1980, the number of people over 65 has increased 183 percent whereas the total population has increased only 71 percent. Given the fact that the old age and survivors' program is essentially a transfer program, it is not difficult, therefore, to see that the country's changing age structure—in the absence of programmatic changes—would eventually erode the program's fiscal integrity.

The second issue—the post-Great Depression record level of unemployment now being experienced—also reveals the dramatic impact of age structure on the economy. Since only a decade ago this country was greatly concerned over a 6.0 percent level of unemployment, the current level of double-digit unemployment seems particularly appalling. There are, of course, numerous causes for this high level of unemployment; however, part of the problem can be traced to the fact that, from 1950 to 1970, the number of people in the age category 10 to 24 increased from 22.0 percent of the population to 27.7 percent of the population. Throughout the decade of the '70s, the national economy had a disproportionately large influx of new workers because of the change in age structure. When the change in the age structure is added to the other changes occurring in the '70s such as the increased participation of women in the labor force, the record levels of unemployment are not as shocking.

In addition to providing instances where age structure influences economic matters, these two examples provide insight into the nature of the effects caused by age structure. In both examples, the changes which took place occurred over a substantial period of time. Because these phenomenon gradually developed over an extended time period, it might seem that the effects of the changes in age structure were inevitable. Quite the contrary. Because changes in age structure develop slowly, a responsive government policy can alter or at least mitigate some of their effects. For Kansans, the "luxury" of this response time means that the economic implications of the state's current age structure are not inevitable. Rather, the implications are what will probably happen if all basic factors remain constant and no new governmental policy is put into place.

State, National, and Regional Age Structures

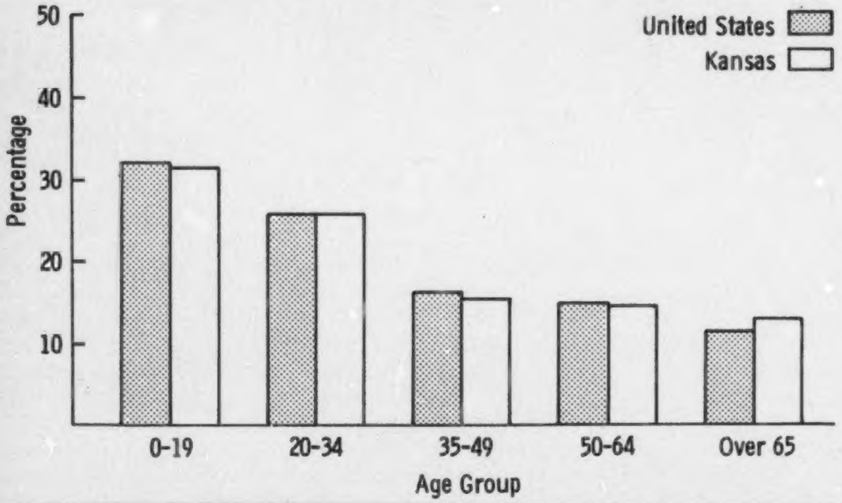
There have been three major shifts in the U.S. birth rate in the twentieth century which significantly affect the structure of the U.S. population today. Starting about 1930, the U.S. experienced a sharp decline in the birth rate as a result of the Great Depression. A low birth rate continued until after World War II when the birth rate shot-up, resulting in the baby-boom. Although the birth rate gradually declined, it remained relatively high until the 1960s, and then it declined dramatically through the early 1970s. As a result of these trends, the U.S. age structure has a bulge in the 20-to-34 age category and disproportionately few members in the 35-to-49 age category. The age structure of the Kansas population is remarkably similar to the U.S. age structure. The only noticeable difference between the Kansas and U.S. age structure is the larger proportion of people Kansas has in the over-65 age category (see Graph 1).

Most of the states which surround Kansas also have a similar age structure—the lone

Table 1
Percentage of Total Population by Age Group for 1980

	U.S.	Kans.	Colo.	Mo.	Nebr.	Okla.
0 to 19	31.98	**31.43**	31.99	31.59	32.43	32.15
20 to 34	25.78	**25.70**	30.18	24.37	25.35	25.12
35 to 49	16.21	**15.32**	16.78	15.93	15.13	16.06
50 to 64	14.75	**14.59**	12.50	14.93	13.98	14.25
over 65	11.28	**12.96**	8.56	13.18	13.10	12.43

Graph 1 United States and Kansas
Percentage of Total Population by Age Group



exception is Colorado. As Table 1 shows, Colorado's age structure is clearly different in two age categories: Colorado has a far larger proportion of its population in the 20-to-34 age category and a much smaller percentage of people over-65. So far, this difference in age structure has not helped Colorado's economic performance much. In fact, from 1970 to 1980, Colorado's per capita personal income grew slightly less than Kansas', even though Colorado experienced a much larger increase in personal income over the period than Kansas did. The reason for this phenomenon is that Colorado's strong growth in personal income was matched by an equally strong surge in total population. Colorado's age structure in the early and middle 1970s probably worked against its short-run economic performance. Workers in their early '20s, which Colorado had an abundance of, tend to be less productive, more unstable, and, as a result, less well paid.

However, the differences in age structure between Kansas and Colorado should work to Colorado's economic benefit in the next decade for several reasons. By having an abnormally large percentage of its population in the 20-to-34 age category, Colorado has more flexibility and adaptability in its labor force. Both of these qualities are particularly advantageous as the U.S. economy undergoes further structural changes, moving from the old industrial base of the past to the newer, high technology industries of the future. A second advantage Colorado has is that, by the end of this decade, the 20-to-34 age category will all be 30 or older and closer to their peak salary years. Thus, through the decade of the 1980s, one would expect Colorado's per capita personal income to grow more rapidly than Kansas'. A final advantage that Colorado's age structure affords is a higher proportion of productive to nonproductive people. By adding the number of people 19 and under to the number 65 and over and then dividing this total by the rest of the population, a ratio of nonproductive to productive members of the population is calculated. For Kansas the ratio is .80, for the U.S. it is .76, and for Colorado it is .68. By having a larger proportion of its population in the nonproductive age categories, Kansas is again at an economic disadvantage relative to Colorado.

Kansas' age structure is not as potentially beneficial as Colorado's, but neither are those of the other states surrounding Kansas. In fact, Kansas is in a better position than many states. When it comes to competing for the desirable new industries, therefore, Kansas will probably not have to worry about competing with Nebraska or Missouri nearly as much as it must be concerned with states such as Colorado.

Intrastate Age Structure

The decade of the '70s was a period of relatively strong economic growth in Kansas: growth in personal income was about 10 percent above the national average, and growth in per capita personal income was more than 20 percent above the national average. But not all of Kansas grew at the same rate; Graph 2 shows the percentage changes in personal income and per capita personal income for the eleven Kansas Department of Economic Development (KDED) economic

Table 2
Age Structure by State Regions

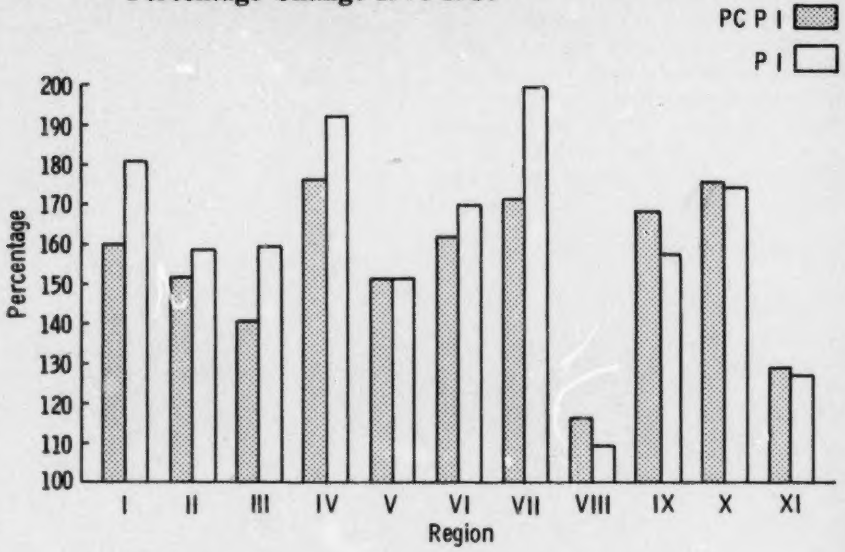
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	State
0 to 19	31.93	30.14	31.56	31.28	29.42	32.27	35.89	32.08	29.97	30.02	31.27	31.43
20 to 34	26.79	21.32	32.41	26.49	21.09	23.07	25.37	21.00	23.13	22.41	19.95	25.70
35 to 49	16.51	14.21	12.61	15.53	15.04	14.97	15.53	14.75	13.96	14.63	14.06	15.32
50 to 64	14.21	15.95	11.42	14.81	16.89	15.03	13.42	16.25	15.67	15.46	16.15	14.59
over 65	10.56	18.38	11.99	11.89	17.57	14.65	9.79	15.91	17.27	17.48	18.58	12.96
Percentage Change in Total Population 1970-1980	8.06	2.73	7.71	5.82	0.02	2.93	10.49	–3.22	–4.08	–0.50	–0.84	5.21

regions. (From 1970 to 1980, the inflation rate was about 100 percent. Thus, by starting the graph at 100 percent, inflation is compensated for.) The most striking aspect of Graph 2 is the large disparities in economic growth experienced throughout the state. For example, Region VII, which is located in the southwestern portion of Kansas (see Map 1), had nearly a 100 percent increase in real personal income during the '70s while Region VIII, which is located directly north of Region VII, had less than a 10 percent increase in real personal income.

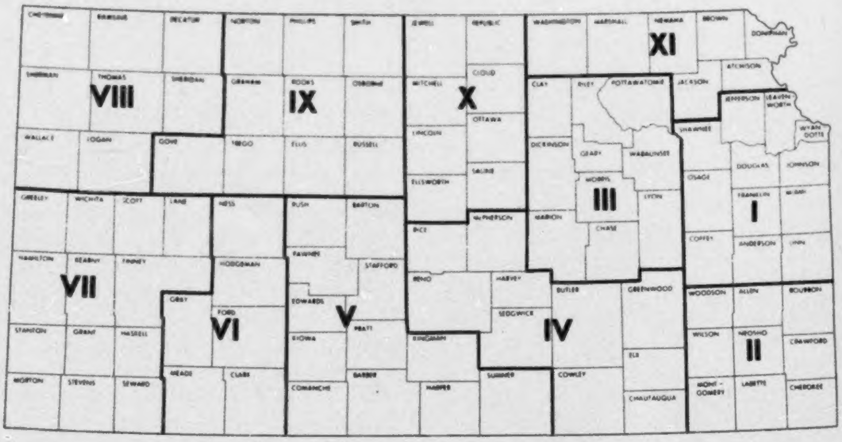
Along with the disparity in economic growth rates, there is also considerable variety in age structure throughout the state. This variety can be seen in Table 2 where the age structures for each of the KDED economic regions are presented. A revealing example of these differences can be seen by comparing the 65-and-over age category for Region VII and Region XI. Region XI has nearly twice the proportion of 65 and over within its age structure. A comparison of Table 2 with Graph 2 further illuminates these differences. The three regions which grew the most in personal income from 1970 to 1980 (Region I, Region IV, Region VII) have three of the four youngest age structures. (Region III has a young age structure, but its character is distorted because of the presence of Fort Riley and Kansas State University within the relatively small population total in the region.) It is also interesting to note that nearly all of the state's growth in population occurred in the four youngest regions. This fact strongly suggests that the regions with declining population are losing their young people to the regions with the strongest economic growth. This is not a startling conclusion, but it does point to a continuing problem that much of Kansas, particularly rural Kansas, must face: a declining population, an aging population, and a stagnant economic situation.

Clearly, a region's age structure and its prospects for economic growth in the '80s are closely related. Indeed, the strong inference is that the same regions which experienced strong economic growth in the '70s will continue to do so in this decade. The list of ratios of unproductive-to-productive age categories in Table 3 illustrates this point. The only three regions with a ratio better than the state's ratio are Region I, Region III and Region IV, and, as was pointed out earlier, Region III's age structure is distorted. Regions I and IV were second and third among the regions in economic growth from 1970 to 1980, and one would certainly expect this trend to continue through the '80s. Region VII, which had the greatest rate of economic growth during the '70s, has a higher ratio, but it reflects an abundance of youth rather than an overload of old. Thus, Region VII will see a greater proportion of its unproductive labor force become productive during the '80s whereas in

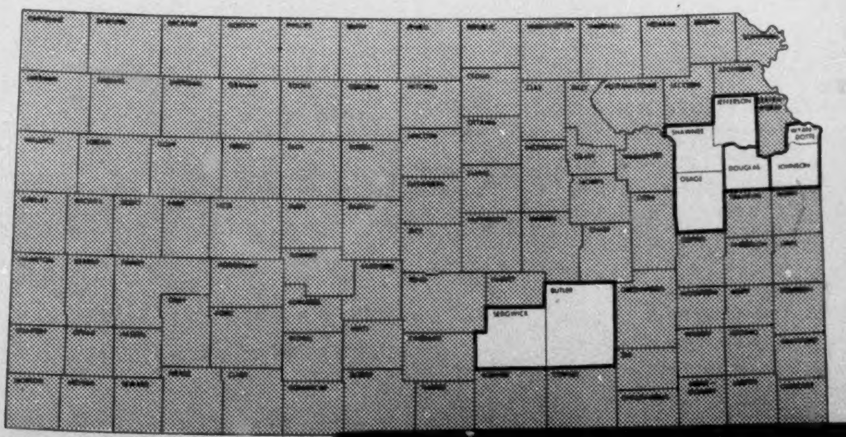
Graph 2 KDED Regions
Personal income and Per Capita Personal Income
Percentage Change 1970-1980



Map 1 KDED Economic Regions



Map 2 Metropolitan Areas



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some other areas that pattern will be reversed.

Because Regions I and IV stand out as much as they do, it is necessary to investigate the importance of the metropolitan areas in each of these regions. There are four Standard Metropolitan Statistical Areas (SMSA) in Kansas, and Region I has three of them—the Kansas part of the Kansas City SMSA, Lawrence, and Topeka—while Region IV has the other—Wichita. (See Map 2). Table 4 contains the relevant data necessary for a comparison of the regions to their metropolitan areas. The only metropolitan area older than its region is the Topeka SMSA, and the Topeka SMSA also grew more slowly in population and personal income than its region. As a matter of fact, the Topeka SMSA was the oldest and weakest performing SMSA. The other SMSAs in Region I, Kansas City and Lawrence, grew more in population and personal income than Region I. They were also significantly younger than Region I. The Wichita SMSA completely dominates Region IV. It is younger than Region IV, and it grew significantly more in personal income than its region. However, the Wichita SMSA's population grew at a slightly lower rate than Region IV.

Table 4 also contains a comparison of all the metropolitan areas to the nonmetropolitan areas (the rest of the state). The metropolitan areas are younger, growing faster in population and personal income as well as in per capita personal income, and have an age structure better suited for growth. The ratio of unproductive to productive age categories is 0.88 for the nonmetropolitan areas while only 0.72 for the metropolitan areas. However, it is interesting to note that, as young as the age structure is for metropolitan Kansas, it is still significantly older than Colorado's population as a whole. The only metropolitan area younger than Colorado is Lawrence, due to the presence of the University of Kansas.

It is clear that the metropolitan areas in Kansas are growing faster than the nonmetropolitan areas. It is also clear that not all of the growth in Kansas is in metropolitan areas. In an effort to further identify the areas of growth, it is helpful to look at another regional division called "the Loop" for the purposes of the study. The Loop is the combination of all of the counties which highways I-70 to Salina, I-135, the Kansas turnpike, and I-35 to Wichita go through (see Map 3). Although the Loop is made up of only 19 of Kansas' 105 counties, it contains 62 percent of Kansas population and 65 percent of Kansas' personal income. From 1970 to 1980, personal income in the Loop grew more than 25 percent than in the rest of the state, and per capita personal income grew more than 10 percent than the rest of the state (see Table 5). Significantly, the Loop is dramatically younger than the rest of the state and has an age structure better suited for growth. The Loop's ratio of unproductive-to-productive age categories is .73 while for the rest of the state the figure is .92. The Loop has another obvious age structure advantage over the rest of the state as well: 28 percent of its population is in the 20-to-34 age category, the age category containing the most adaptive and flexible workers, whereas the rest of the state only has 22.5 percent of its population in this age category. The Loop has been the major area of economic growth in the past, and its future looks the brightest. If the state is going to develop a program for economic development, this area looks the most promising.

Although the Loop is the state's major area of economic growth, it is not the only area. As was noted earlier, Region VII in southwestern Kansas had the greatest growth in personal income and per capita personal income during

Table 3

		Ratio of Unproductive to Productive
Region	I	.74
Region	II	.94
Region	III	.77
Region	IV	.76
Region	V	.89
Region	VI	.88
Region	VII	.84
Region	VIII	.92
Region	IX	.90
State		.80

Map 3 The Loop

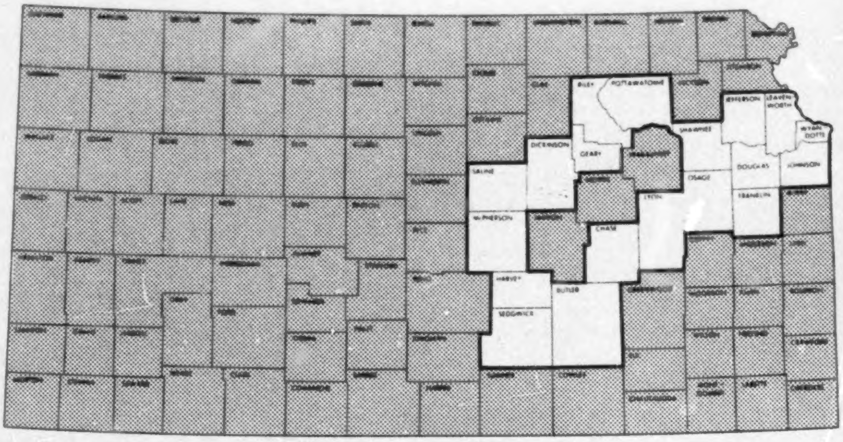

Table 4
Metropolitan—Nonmetropolitan Data

	Nonmetro	Metro				
		Total	Kansas City (Kansas Part)	Lawrence	Topeka	Wichita
Age Structure						
0 to 19	31.05	31.87	32.61	30.28	31.03	31.71
20 to 34	23.97	27.66	26.21	40.35	25.65	28.05
35 to 49	14.54	16.21	17.29	12.37	16.08	15.75
50 to 64	14.81	14.34	14.69	9.53	14.70	14.60
over 65	15.64	9.91	9.20	7.47	12.54	9.89
Population Growth 1970 to 1980	3.50	7.22	9.42	16.76	2.67	5.64
Income Growth 1970 to 1980						
Personal Income	164.3	186.9	183.9	190.5	162.1	201.6
Per Capita Personal Income	155.3	167.5	159.4	148.8	155.3	185.4

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The continuing problems that much of Kansas, particularly rural Kansas, must face are a declining population, an aging population, and a stagnant economic situation.

the '70s. If one looks at those areas in western Kansas that are both urban and experienced significant growth, Ellis County (Hays), Finney County (Garden City), and Ford County (Dodge City) appear promising (see Map 4). Table 6 contains the relevant data for these counties. As can be seen, they all experienced dramatic growth during the '70s. Additionally, their age structures suggest that they are in a better situation in terms of future economic growth than the rest of western Kansas because they do not face a restraint that is otherwise unique in western Kansas: a high ratio of unproductive-to-productive age categories due to the burden of a large proportion of old people. Even though these three counties' ratios are relatively high, the cause is the disproportionate number of people under 19. Although these three areas' immediate future does not look as propitious as the area of the Loop, the decade of the '80s could quite likely be another period of sustained growth.

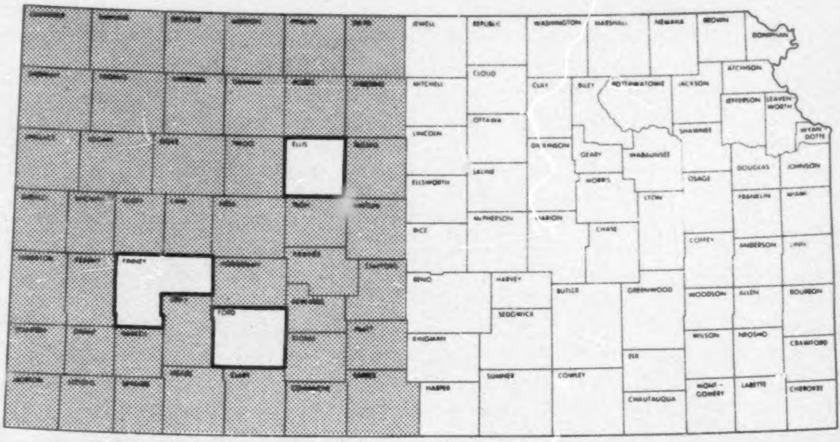
Table 5
Loop Data

	The Loop	The Rest of the State
Age Structure		
0 to 19	31.87	30.72
20 to 34	28.19	21.63
35 to 49	15.74	14.64
50 to 64	13.83	15.83
over 65	10.37	17.19
Population Growth 1970 to 1980	7.51	1.67
Income Growth 1970 to 1980		
Personal Income	185.3	159.1
Per Capita Personal Income	165.4	154.8

Table 6
Areas of Urban-Economic Growth—Western Kansas

	Total	Ellis	Finney	Ford
Age Structure				
0 to 19	34.81	32.99	37.73	33.91
20 to 34	28.25	31.84	27.71	24.91
35 to 49	14.02	12.81	14.49	14.86
50 to 64	12.69	12.22	11.87	14.01
over 65	10.22	10.14	8.19	12.31
Population Growth 1970 to 1980	12.03	5.53	25.75	7.65
Income Growth 1970 to 1980				
Personal Income	243.8	227.4	316.3	199.9
Per Capita Personal income	206.9	210.2	231.0	178.6

Map 4 Areas of Urban-Economic Growth (Western Kansas)



Conclusion

Three basic conclusions can be drawn from this study's analysis:

1. The age structure in Kansas is similar to that of the U.S. and most of the surrounding states. However, Colorado does have an age structure which provides more opportunity for economic growth.
2. There is great variety in the age structures of the various regions of Kansas. Those regions which experienced economic growth in the '70s appear to be those regions which have the best opportunity for economic growth in the '80s judged solely on the basis of age structure. Specifically, the area in eastern Kansas defined by the interstates seem to be in the best position for the decade ahead.
3. Eastern Kansas is not the only place where economic growth is probable. Three areas—Hays, Garden City, and Dodge City—experienced dramatic growth in the '70s, and their age structures afford the possibility of continued growth in the '80s. It must be kept in mind, however, that most of Kansas, particularly rural Kansas, has a disproportionate percentage of persons over 65.

One final point should be emphasized: age structure does not inevitably determine economic growth. It is simply a major factor which must be responded to if and when Kansans settle upon a coherent program for economic development. Clearly, the most evident impacts of age structure tend to inhibit growth. And yet, if there is not an appropriate age structure for growth, then changes can be instituted to either alter the age structure itself or adapt to it in a productive manner. Critical in this respect are programs to attract job opportunities to Kansas and put a halt to the migratory flow of youth from the state.

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Research Notes

Kansas' Business Climate Rated

Another study of state business climates has been released recently. This project, commissioned by *INC.* magazine, is the most current in a small surge of such reports.

The study, which attempted to rank the states in terms of a positive "climate" for small business, placed Kansas sixth in the nation. Some of Kansas' Plains' neighbors were highly rated as well—Colorado placing third and Oklahoma ninth. Missouri, Iowa, and Nebraska were not as favorably regarded, placing twenty-ninth, fortieth, and forty-third, respectively.

INC.'s high ranking of Kansas follows a recent Alexander Grant study which placed Kansas fourth nationally in terms of overall business climate. Yet, due to fundamental weaknesses in the procedures employed in developing these rankings, it is important that not too much stock be placed in them. The purpose of this note is to discuss the *INC.* study approach and illustrate its shortcomings. For a similar discussion of the Alexander Grant report, see the article by Robert Glass in the October-November 1981 *KBR.*

INC. ranked the 50 states in five categories: capital, labor, taxes, business activity, and state support. Each category was weighed in accordance with its perceived importance to a state's business climate. On a 100-point rating scale, capital resources and state support were each given 25 points; labor and business activity were allotted 20 each with taxes receiving the other 10.

The *INC.* study is narrower in scope than its Alexander Grant counterpart, which, in addition to a number of labor market and taxation categories, also analyzed transportation and energy costs, state debt, pollution expenditures, and educational activity. Both studies, however, are similar to the extent that their rankings are based exclusively on quantifiable factors. It is not that the researchers in either case fail to recognize the existence of other, qualitative factors, but rather that, given their goal of producing explicit ratings, there is by definition no way in which these factors can be given a tangible accounting. As such, these analyses both proceed to develop their rankings under the implicit assumption that omitted factors are constant across the states.

In general, such a limiting assumption is employed in most research endeavors, but the assumption is made with the expectation that those factors held constant are not particularly important to the study and that, indeed, little variation among them does exist within the sample.

Unfortunately, neither of these expectations is confirmed in this case. A myriad of quality-of-life factors are commonly recognized to be important location determinants, especially for labor-intensive firms, and they are factors for which a great deal of variability exists among the states. Included among these *quality* factors are such categories as climate, recreational amenities, housing costs, and quality of the education system. Elements such as these are particularly crucial in terms of a state's ability to attract and retain a quality labor pool, and numerous studies of firm location confirm that availability (as well as cost) of labor is a crucial location decision element.

Business climate studies, such as those undertaken by *INC.* and Alexander Grant, attach major significance to labor cost and union activity variables, but availability and skill levels of labor are omitted. Yet, low wages, as attractive as they are to firms, are found less desirable by workers with the result being that low-wage states and states which rate poorly in a quality-of-life context may be unable to attract the labor force necessary to stimulate particular forms of business activity.

In addition to labor availability, the other general factors considered to be primary location determinants are proximity to markets and availability of raw materials. That is, firms will base their plant, if possible, near their customers and close to significant inputs into their production process. The important point to note regarding these factors is that they are very firm specific. For example, locating proximate to timber resources will be an overriding concern for a sawmill but will mean nothing to a microelectronics firm. As such, it is hard to see how general, very aggregated measures of overall business activity within a state can say anything significant about that state's ability to attract or retain businesses. Yet it is these types of measures—employment growth, population change, and income growth—which comprise a significant portion of the *INC.* index.

It would seem that, rather than constructing arbitrary indices of business climate, the best way to measure a state's business environment is to simply assess its recent performance. In other words, to determine how fast a state's economy has grown as measured by key economic variables over, for example, the past decade relative to its neighbors. The best measures to follow in using this approach are nonfarm earned income growth and growth in nonagricultural employment within a state. Nonfarm measures are preferred because they

Table 1
Economic Performance of the Plains States from 1970-1980: A Comparison to the *INC.* Rankings

	(1) Growth in Non-Farm Personal Income 1970-80	(2) Rank Among Plains States	(3) Employment Growth 12/1970-12/1980	(4) Rank Among Plains States	(5) Overall *INC.* Ranking
Kansas	**183%**	**2**	**41.0%**	**2**	**6**
N. Dakota	204	1	49.1	1	14
Minnesota	166	4	35.4	3	19
Missouri	130	7	18.9	7	29
Iowa	163	6	24.4	6	40
S. Dakota	177	3	34.7	4	41
Nebraska	164	5	30.5	5	43
United States	155		28.8		

are more stable than indicators which incorporate the farm sector and, furthermore, because movements in farm sector indicators are more apt to be affected by extraneous factors, such as weather conditions and world markets, than by elements relating particularly to a state's business climate.

Undertaking the analysis described above and comparing it to the *INC.* rankings produces some interesting results. For example, Delaware which was ranked next to last by *INC.* recorded growth in earned income between 1970-1979 of 116 percent and growth of 28.9 percent in employment from 1970-1980. Both of these percentages are in excess of the national average. Delaware, it seems, must be doing something right, in spite of *INC.*'s poor evaluation of it.

Table 1 presents results of this analysis for states in the Plains region. In the Table, states are listed in accordance with their *INC.* ranking. Column 1 contains growth in nonfarm earned income between 1970-1980 in these states, and column 2 ranks them within the Plains region by this indicator; columns 3 and 4 present similar computations for nonagricultural employment between 1970-1980.

As measured by either variable, the states' actual economic performances are quite different than would have been anticipated based upon the *INC.* rankings. In particular, North Dakota, ranked second by *INC.*, has out performed all other Plains states, including top-rated Kansas, over the past decade. Missouri, ranked in the middle among the Plains states by *INC.*, has actually performed much worse than any other state in the region.

Overall, the Plains' economic performance belies the poor regard for it as expressed in the *INC.* rankings. All states in the region except Missouri out performed the nation in terms of income growth from 1970-80, and all except Missouri and Iowa exceeded the national average for employment growth.

In sum, the recently published reports on business climate, though representing reasonable attempts to quantify an elusive subject, should be interpreted with considerable caution. This note discussed some of the major methodological weaknesses involved in such undertakings. These included (1) arbitrariness in choosing variables for inclusion and in weighting them, (2) inability to give consideration to important qualitative factors, and (3) failure to consider factors from a broader perspective than just that of business. In addition, it was argued that even under the most favorable circumstances business climate studies have little practical value because the elements which attract or repel businesses are generally very firm specific and relate to the very particular needs of each industry. On the other hand, the broad generalities which do find their way into business climate studies are generally not the critical factors in determining a firm's location decision.

Finally, it was shown that the reported business climate rankings do not provide a very good indicator of a state's actual economic performance, which, it was argued, is the only true indicator of business climate.

Richad Sexton
Research Economist
The Institute for Economic and Business Research

State and Local Government Employment in Kansas

Approximately 20 percent of Kansas' total employment is in the public sector, the great majority of which is in state and local government (86 percent, state and local; 14 percent, federal). Given its relative significance, any change in this subsector's employment will have a pronounced impact on the state's labor market. In order to provide a context within which developing or changing patterns in public service employment should be considered, this research note focuses upon state and local government employment in respect to (1) its growth and (2) its size. Given some minor exceptions, the data indicate that Kansas' employment patterns are quite similar to those for the nation; specifically, two main patterns prevailed. First, government employment in Kansas has been growing for an extended period of time, and only very recently have signs of reversal been observed. Second, Kansas' per capita employment in state and local government is relatively large in comparison to that of the region and the nation.

From 1960 through 1981, state and local government employment in Kansas grew continuously, consistent with national patterns (see Figure 1). In 1960, almost 90,000 people were employed in the state public sector; by 1981, this number had risen by 80 percent to over 160,000. This pattern of growth is not unique to Kansas. For the period 1945-1980, for example, the Bureau of Census reported continual growth in state and local government employment for the nation. Not until 1981 did this trend begin to show signs of dissipating as state and local government employment declined. Conversely, public service employment in Kansas rose modestly in 1981 and did not begin to decline until early 1982, suggesting that Kansas tends to follow the national pattern but at a lagged pace. Caution is advised in regard to attaching too much significance to either the 1981 national or the 1982 Kansas declines, given that 1982 is an election year with growth in government a major issue. These moderate declines might best be interpreted as an indication of the stabilization of government employment rather than a downward trend.

In addition to the issue of government growth, the size of state and local government relative to other states is significant. By comparing the size of Kansas state and local government—based on the absolute number employed—and the number employed per 10,000 population to regional and national averages, the relative size of the Kansas' sector can be inferred.

In terms, then, of absolute numbers, Kansas' governments employ at a slightly less-than-average level on both a regional and national scale. In October of 1981, Kansas employed almost 164,000; at the same time, Missouri and Nebraska employed 261,110 and 115,437, respectively (see Table 1). Thus regionally, Kansas is somewhat smaller than average. A comparison with national figures yields the same result. Kansas employees represent approximately 1.0 percent of the U.S. total for state and local employees; to be

Table 1
State and Local Government Employment

State	State and Local[1] October, 1981	State and Local[2] Employment per 10,000 Population October, 1979	Rank[2] October, 1976
Kansas	**163,918**	**534.30**	**13**
Iowa	182,793	497.40	30
Missouri	261,110	468.70	43
Nebraska	115,437	584.90	4

[1] Source: Bureau of the Census, *Commerce News*, September 22, 1982
[2] Source: National Conference of State Legislatives, *State Fiscal Indicators*, 1982.

considered average, this percentage would have to reach 2.0 percent. Given that Kansas is a smaller-than-average state, it is not surprising that it is a smaller-than-average employer on the basis of absolute numbers.

When the number of state and local government employees is examined on a per capita basis (the number employed per 10,000 in population), however, Kansas employment levels are far above the average. Applying the per capita indicator to Kansas reveals 534.3 people working in state and local government per 10,000 in population, ranking it as the thirteenth largest state and local employer per capita (see Table 1). Given that Kansas is only the 32nd largest state by population, the state employs a very high number relative to its population.

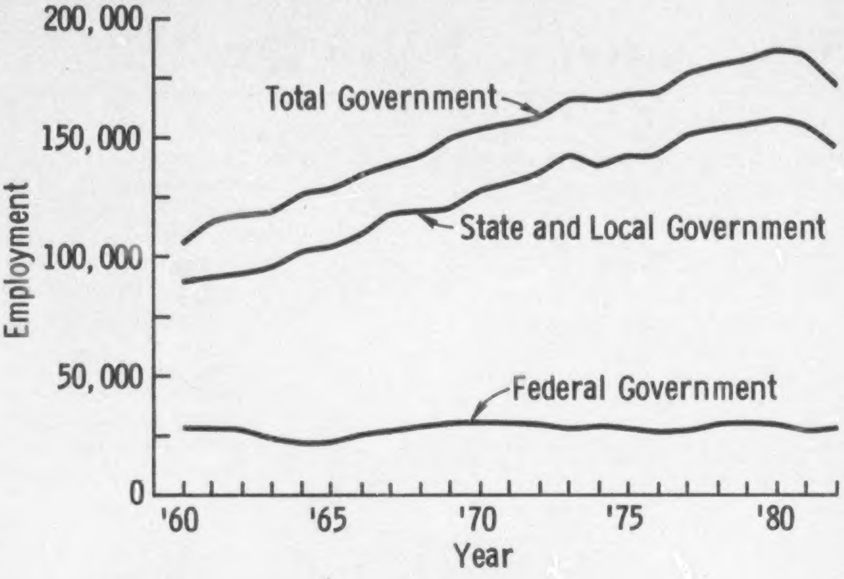
This high level of employment is explained partially by a national pattern which demonstrates an inverse relationship between employment per capita and state size; that is, smaller states have high levels of government employment. This trend is observed in the region as Missouri, the largest state, employs the least per capita, whereas Nebraska, the smallest state, employs the highest per capita. This relationship is further supported by estimating at least squares trend line for all of the fifty states. The estimated equation is:

$P_s = 17.57 - .03\ E_s \quad R^2 = .09$

Where P = population of the state, and E = the state and local government employment per 10,000 of the state.

Thus, the inverse relationship between state and local government employment per capita and population is confirmed by the negative coefficient of .03. The relatively low R^2 indicates that, although the relationship is statistically significant, population certainly is not the sole determining factor in state employment levels. This data also suggest that certain "economics of scale" operate in government employment, given that larger governments appear to operate more efficiently. This fact is intuitively appealing because smaller governments would need minimum employment levels to cover essential services (e.g., police) regardless of their population and because public sector employment levels to service larger communities would not increase proportionately to population. As indicated, however, population is a rough indicator of state employment levels, but factors such as level of social services and other political factors also govern the size of state and local government payrolls. For example, New York, the second largest state in the nation, is ranked 12th in employment per capita. New York has an unusually high level of per capita employment for a state of that size which indicates that they have chosen to provide services not available in most states or that they are not operating very efficiently. Kansas, on the other hand, is consistent with the trend for all of the states, suggesting that Kansas operates with a level of employees in state and local government similar to most states.

Figure 1
Government Employment in Kansas, 1960-1982

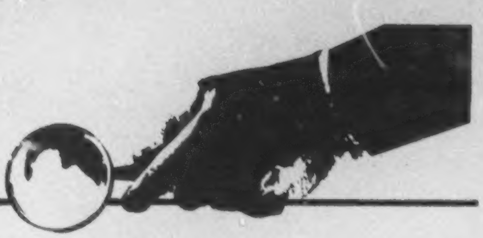


Source: Research and Analysis Section
Division of Staff Services
Kansas Department of Human Resources

In conclusion, neither the fact that Kansas has been experiencing extensive growth in government nor that it employs a relatively large number should be alarming. The growth of public sector employment in government is a trend experienced on a national scale and is far from being unique to Kansas. (This is not to say, of course, that this trend is not subject to criticism.) Per capita employment in Kansas also follows the national trend of smaller states employing more persons in state and local government. Thus, Kansas state and local government employment levels are about average for the nation.

Nancy Brown Johnson
Research Assistant
The Institute for Economic and Business Research

Economic Conditions
The National Review



In the Midst of Gloom, Signs of Recovery

As 1982 draws to a close, data on the economy's third quarter performance is becoming complete. The picture being painted is not very bright. After growing 2.1 percent in 1982:2, real GNP was flat in the third quarter. However, figures for both quarters reflect a substantial inventory build-up over the past four months, without which real sales fell 0.9 and 0.6 percent, respectively, in 82:2 and 82:3.

Further adding to the gloom is news that the fourth quarter did not get off to a very good start. A sampling of recently released economic data reveals that in many sectors the economy turned down even further in October. For example:

- Industrial production was down 0.8 percent in October, following a 0.7 percent decline in September.
- Foreshadowing, perhaps, further declines in industrial production, new factory orders declined 3.9 percent in October after scoring a modest 1.2 percent increase in September.
- New construction contracts declined 10 percent in October over the previous month.
- October unemployment rose 0.4 percentage points to yet another new post-Depression high of 10.8 percent.
- The factory capacity utilization rate took another tumble in October, reaching 68.4 percent, the lowest rate since the statistic has been kept beginning in 1948.

More information on the third quarter performance and on economic activity over the previous 12 months is detailed in Table 1. Most notable in the Table is the significant decline in production-based measures such as employment, industrial production, and real GNP. Over the past year, industrial production has declined 9.4 percent, indicating the insipid weakness which continues to pervade the nation's manufacturing sector.

Price increases have been moderate. The 4.9 percent CPI increase over the 12 months ending in September 1982 is less than half the increase (10.9 percent) over the 12 months from September 1980–September 1981 and lower still than the 12.6 percent jump from September 1979–September 1980. Personal income, buoyed by rapid growth in transfer payments, has continued to increase over the recession, but it should be noted that the income growth rate has barely kept pace with the rate of increase in prices.

Relative to the predictions of recovery, an upturn in the economy is long overdue, and, indeed, intermixed with the gloom have been bits of good economic news which, at least according to the more optimistic analysts, signal the imminence of an upturn.

Much of the optimism is centered on recent trends in the automotive and housing industries. These key sectors are often forebearers for the rest of the economy, and their reutilization is a crucial cornerstone in laying the groundwork to recovery.

During the fall months, the auto industry was able to work down an inventory backlog through a combination of rapidly rising sales—fueled by special purchase incentives—and production cutbacks. This trend continued through November during which production was cutback 6.0 percent from a year ago, while sales in the meantime ranged 45 percent higher. The hope in this respect is that the inventory drawdown sets the stage for a sustained production pickup in autos. Others, being less optimistic, fear that sales will fizzle as the incentive packages terminate.

Housing starts in October were up 1.0 percent from the previous month and 31.4 percent from a year ago, exceeding one million units at an annualized rate for the fifth time during the last six months. Auguring future improvement, building permits jumped 18 percent in October over the September level and 60 percent above the previous year. In the meantime, October home sales were up 35.7 percent from the depressed year-ago levels.

Table 1
Selected U.S. Economic Variables Compounded Annual Rates of Change

	1982:2–1982:3	1981:3–1982:3
Total Civilian Employment	−0.2%	−0.5%
Consumer Price Index	4.2	4.9
Producer Price Index (Finished Goods)	4.2	3.7
Industrial Production	−4.0	−9.4
Personal Income	6.1	5.1
Retail Sales	1.9	6.7
Real GNP	0.0	−2.8

Certainly a principal factor motivating improvement in housing and autos has been the sharp decline in borrowing costs which only recently has become reflected in lower mortgage rates and declines in consumer credit costs. Surprisingly, however, lower interest rates have yet to stimulate a turnaround in consumer durables—the other key hard-goods sector. Overall durable goods' orders were down 4.9 percent in October.

Compounding problems in durables and threatening the fledgling recovery in housing and autos are signs that the interest rate decline may be bottoming out. These signals appear to be true particularly in respect to long-term instruments. For example, long-term treasury securities reached a 1982 low of 10.31 percent during the first week in November. A month later they had risen almost one-half point to 10.74 percent.

This turnaround in long-term rates is being fueled by renewed fears of inflation brought about, ironically, through a loosening of credit conditions by the Federal Reserve intended to decrease interest rates. Over the past four months, M1 has grown at a 16.4 percent annual rate—considerably in excess of its growth rate earlier in the year. Broader measures of the money stock, such as M2 and the St. Louis Federal Reserve Bank's adjusted monetary base, however, have not exhibited nearly such rapid growth.

Outlook

The consensus outlook is for GNP to remain nearly flat through the fourth quarter with real growth commencing in 83:1. Considerable uncertainty and disagreement exist regarding the strength of recovery. Optimists can point to several signs suggesting that an upturn is at hand:

- The previously discussed improvement in autos and housing.
- Increases in the Index of leading economic indicators for six of the last seven months.
- A 4.0 percent jump in productivity (output/paid hour of work)—a traditional sign that a recession is bottoming out.
- Sustained surges in the stock and bond markets which not only have buoyed

confidence but also have augmented consumer wealth which may translate into increased spending.

More pessimistic forecasters believe that recovery, although possibly at hand, will be weak and short-lived. This view is based on a perception that the world economy is going through a period of chronic sluggishness and, furthermore, that three nearly solid years of economic stagnation have sufficiently eroded confidence in the economy so as to prevent a robust revitalization. A particular concern in this regard is that recovery will spark a renewal of inflationary fears that, in turn, will drive up interest rates and choke off the resurgence.

The uncertain perspective outlined above should serve as a caveat to the outlook specifics which follow.

Production

With unemployment and factory capacity utilization at a post-war high and low, respectively, the potential exists for a robust expansion of industrial output. The missing catalytic element remains demand. Consumers continue to be unwilling to spend, and businesses, faced with excess capacity, have been reluctant to undertake investment. Unfortunately, in the near term, there seems little chance that demand will be substantially shaken from its lethargy.

Employment

It is becoming apparent that the U.S. faces a relatively long period of unemployment in excess of 10 percent. In fact, it will take several years of sustained growth to reduce unemployment to the 6.0-7.0 percent range. At present, it appears destined to exceed 10 percent through the winter months and to exceed 9.0 percent through much of 1983.

Sales

At this writing, information on holiday sales is not available. Preliminary indications are not good. Personal income has held up well throughout the recession, and prices have stabilized. These factors plus the paper wealth generated recently in the stock and bond markets provide the necessary ingredients to stimulate sales. The missing element seems to be consumer confidence in the economy, a catalyst which will not be restored easily.

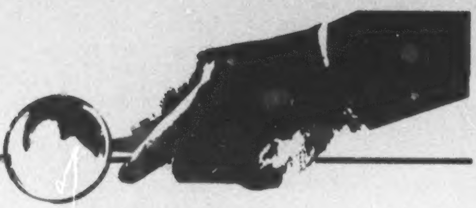
Prices

Reflecting the industrial weakness, price indexes for crude and intermediate goods continue to decline. Crude materials prices fell 0.7 percent in October after a 1.5 percent drop in September, while intermediate prices were flat in October and down 0.2 percent in September. Although new talk of inflationary fears has recently developed, these concerns will not be realized over the next several months. Consumer prices should continue to advance modestly in the range of 0.2-0.5 percent per month through spring. Inflation over all of 1982 should be about 4.4 percent.

In summary, the unfortuante state of economic affairs continues to persist much longer than most had anticipated. Although elements for recovery do seem to be slowly moving into place, at present the recovery scenario is so fragile that more solid prospects for a resurgence can only be hoped for and not expected.

Richard Sexto
Research Economist
The Institute for Economic
and Business Research

The Kansas Economy



Employment

The 0.2 percent drop in Kansas unemployment from 6.0 percent in August to 5.8 percent in September does not signify any real improvement in the Kansas economy. September is traditionally a month when, due to seasonal factors, unemployment improves. In particular, the return of students and nonteaching personnel to school normally drives the autumn unemployment rate down. Further evidence of this fact is the steady rise in seasonally adjusted unemployment rates for Kansas from 6.22 percent in August to 6.94 percent in October.

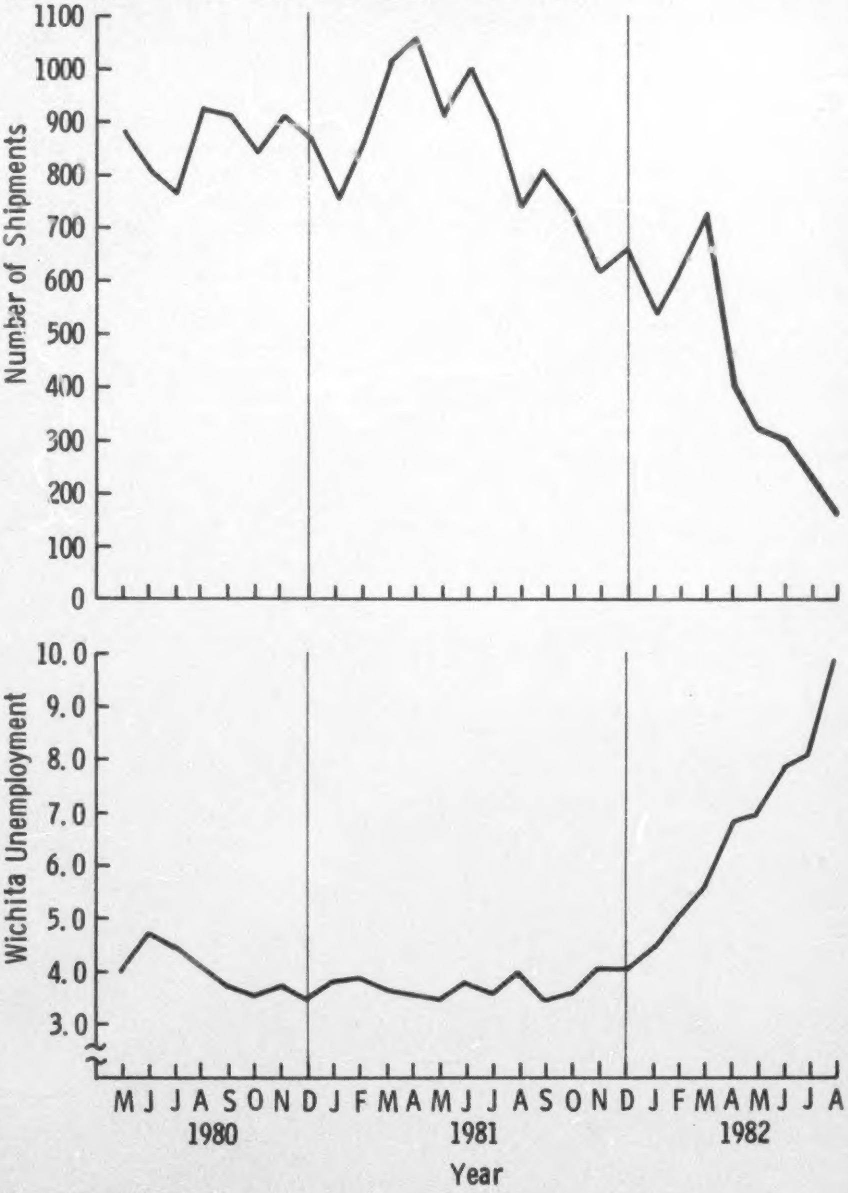
An examination of various counties across the state reveals a mixed employment picture. For example, Reno County's unemployment rate rose dramatically from 5.9 percent to 8.5 percent from August to September primarily due to a layoff in Hutchinson by Cessna, and Montgomery County's extremely high level of unemployment of 12.5 percent for August and September, crept up even higher in October to 12.8 percent. These continually high levels reflect a major plant closing (600 employees) and a significant number of layoffs from other major employers; consequently, they are anticipated to continue. Topeka also experienced a gradual rise in unemployment from 5.9 percent in September to 6.0 percent in October. As previously noted, these downward trends are even more pronounced when seasonal factors are accounted for.

Three other key locations within the state, however, demonstrated mild, yet somewhat qualified improvements in their unemployment rates: Riley County, Saline County, and the Wichita SMSA. Riley County, which includes Manhattan, declined 0.6 percentage points from 4.4 percent in August to 3.8 percent in September. Given the County's dependence on Kansas State University, this decline is anticipated because of returning students. Saline County's unemployment declined 0.5 percent from August to September; however, at the same time that the unemployment rate declined, the number employed also decreased indicating an overall decline in the labor force. Such a decline usually occurs because of a combination of (1) the unemployed losing hope of employment and withdrawing themselves from the labor force and (2) out-migration from the area. In this case, the decline in the unemployment rate overstates the real improvement in the economy of the County. Conversely, Wichita's labor force has actually increased while the unemployment level declined by 200 people. However, given seasonal factors and Wichita's pervasively high unemployment rate (8.7 percent in October), it is certainly difficult to regard Wichita as the growth leader of the state's economy.

Logically, a central factor to understanding and forecasting Wichita's employment is the

Figure 1

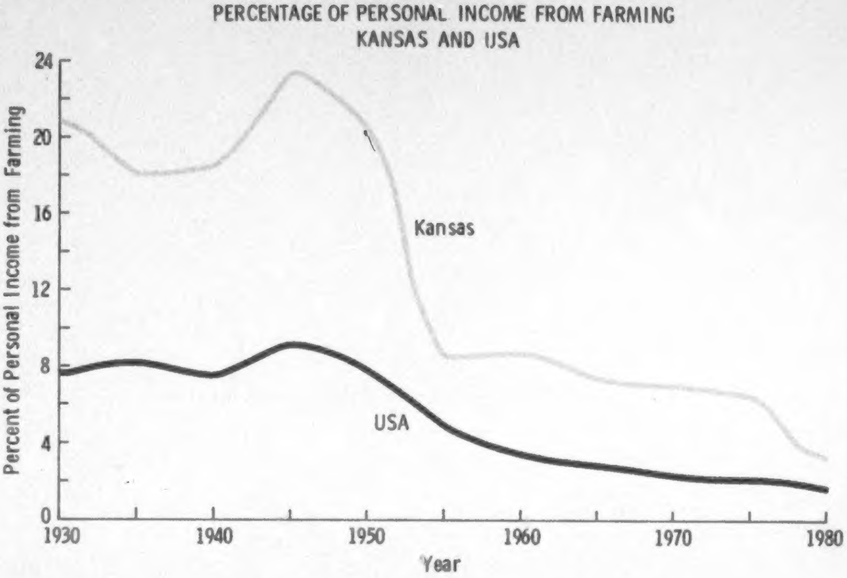
A Comparison Between New Complete Aircraft Shipments (Non-Military) and Wichita's Unemployment Rate.



Source: Bureau of the Census,
Current Industrial Reports, "New Complete Aircraft and Aircraft Engines, August 1982," and
Research and Analysis Section
Division of Staff Services
Kansas Department of Human Resources
Kansas Secretary of State.

aircraft industry. In the comparison drawn in Figure 1, it is apparent that, over the past two years, the movement of Wichita's unemployment rate coincides with nonmilitary aircraft shipments. As shipments decline, unemployment increases, indicating an inverse relationship. As expected, unemployment is not extremely sensitive to the swings in shipments which occur from month to month. This factor is most likely due to the long lead times in aircraft production, which allow for fairly accurate human resource planning and minimal labor force fluctuations. Additionally, aircraft production is not the sole factor in explaining Wichita's unemployment, so other industries, with less dramatic fluctuations in production, may serve to eliminate wide variations in employment levels. The effect of shipments on Wichita's unemployment became most pronounced at the beginning of 1982, when the downward trend in aircraft shipments dropped dramatically. Although this trend began in the second quarter of 1981, it appeared to have little effect on unemployment levels until late in 1981 and early 1982, suggesting that unemployment rates lag behind the actual declines in production. Therefore, it can be expected that, once the downward trend in shipment levels begins to reverse, employment increases will also lag at least a quarter behind shipment increases. Aircraft manufacturers will probably be hesitant to increase their payrolls until they are convinced that the recession has truly bottomed out. However, due to the persistently high levels of long-term financing and the continuing struggle of the airline industry, this reversal is not expected in the near future unless military aircraft orders take up the slack left by private industry.

Figure 1



Agriculture

The Cyclical Stability of the Kansas Farm Economy

With the Kansas economy currently reeling from the recession, it is interesting to examine the relationship of the farm economy in Kansas to the state's general business condition. Of particular relevance is the extent to which the Kansas farm sector is procyclical (tending to augment the business cycle) or counter cyclical (tending to move against or to offset business cycle fluctuations). Ideally, a state economy contains some significant countercyclical industries to reduce the deleterious impact of business cycles.

The farm economy in Kansas has been declining in significance relative to nonfarm activity since the end of World War II. In this respect, the Kansas experience has mirrored that of the rest of the U.S. as is indicated in Figure 1 which plots personal income from farming as a percentage of total personal income for the U.S. and Kansas. As examination of the figure indicates that farm income in Kansas has declined from about 23 percent in 1945 to less than 4.0 percent at present. As such, it has moved closer to the U.S. average. However, when consideration is given to the peripheral industries which exist to service the farm sector and are dependent upon it, agriculture remains an important industry to Kansas.

Kansas agriculture today is heavily dominated by two commodities—wheat and beef—which jointly account for about 75 percent of farming receipts in Kansas. This percentage has been growing steadily and is in marked contrast to 50 years ago when the state's agriculture was more diversified with hogs, dairy, and poultry (in addition to wheat and beef) accounting for significant portions of farm income.

A diversified economy is conducive to stability, so the trend in Kansas agriculture towards domination by wheat and beef has tended to make farm income increasingly volatile. This is particularly true in that beef and wheat are inherently more prone to destabilizing price, output, and income fluctuations than is, for example, dairy.

In order to fully assess the procyclical or counter cyclical impact of agriculture in Kansas, it is necessary to decompose the sources of instability in wheat and beef. For wheat, supply-side shocks occur due to production variations caused primarily by weather conditions. On the demand side, export demand, which is dependent upon world-wide economic and production conditions, is an extremely volatile element and a very important one given that generally over 50 percent of U.S. wheat production is exported.

For beef, supply-side volatility is due primarily to fluctuations in imput costs, most notably corn prices. In this respect, states in which corn and beef are jointly produced on a substantial scale have an element of built-in stability because low prices and incomes for corn growers generally mean high incomes for beef producers. On the demand side, beef consumption is closely tied to the business cycle because it represents a commodity which consumers can easily cut back on during hard times.

In sum, supply-side disturbances are most often random shocks and are unrelated to the business cycle. Wheat demand is dependent upon worldwide economic conditions which may or may not mirror the domestic economic situation upon which beef depends. The procyclical or counter cyclical influence of the farm sector depends, then, upon the complex interplay of the above-mentioned forces, and, as such, no easy generalizations can be made. The alternative, therefore, is to study the pattern of behavior in the farm sector relative to the general state economy over the past several recessions. (See Figures 2 and 3).

The United States has suffered through five periods of officially-declared recessions. These periods, which include parts of 1960, 1970, 1973-75, 1980, and 1981-82, are shaded in the figures.

The upper half of Figure 2 contains real (inflation-adjusted) earned personal income in Kansas over the past 25 years. The lower half depicts real receipts from wheat and beef during the same period. The increasing volatility of these receipts since 1970 is easily discerned. From examining the growth rate of real earned personal income, it is evident that Kansas was relatively unaffected during the first two recessions of this period, although a discernable slowing of the growth rate is evident in the 1970 recession. However, personal income declined sharply during the

Figure 2

REAL EARNED INCOME AND
REAL BEEF AND WHEAT RECEIPTS IN KANSAS
(1958 - 1981)

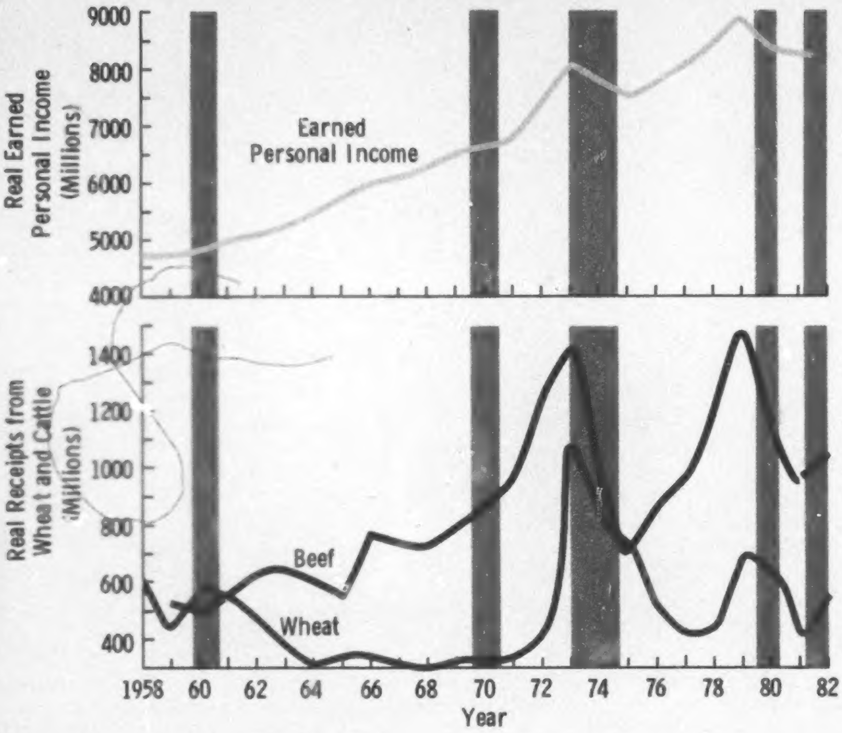
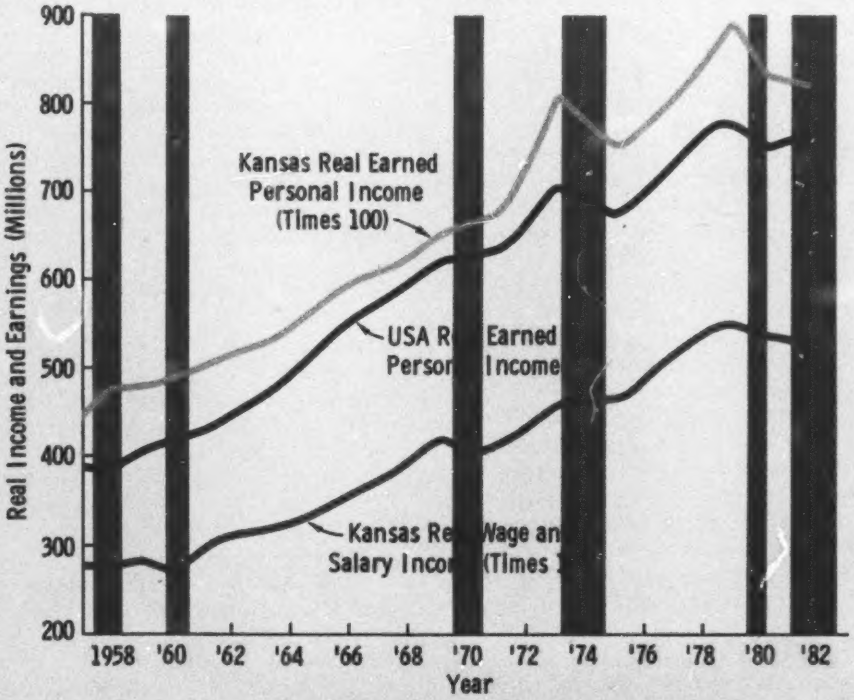


Figure 3

REAL EARNED INCOME IN KANSAS AND THE USA
(1957-1982)



1973-75 downturns and during the slumps of the 1980s.

Figure 3 compares real earned personal income in Kansas and the U.S. over the same time period. This comparison indicates that the overall performance of the Kansas economy has quite closely mirrored the national trend.

To sort out the performance of the Kansas farm-related sector to the nonfarm sector, examine the plot of Kansas real wage and salary income in Figure 3. This measure is intended to be a nonexact approximation of nonfarm related income, the hypothesis being that much of farm related earnings accrue to proprietors, e.g., to farm owners and to the dealerships which service them. Note that in both the 1960 and 1970 recessions this measure took a sharp drop due primarily to aircraft cutbacks in Wichita. Overall Kansas personal income does not reflect this decline, however, because it was offset in both cases by rising farm-related earnings. These, as Figure 2 indicates, were stimulated by higher wheat receipts in 1960 and by increased beef earnings in 1970.

During the severe 1973-75 recession, aircraft held up quite well, and, as a result, Kansas wage and salary income leveled off but did not decline. Kansas overall personal income, however, dropped dramatically, fueled by substantial declines in wheat and beef receipts, from their 1973 highs. Yet, the impact was not too severe because the decline, which began from an extremely high income level, essentially represented a return to trend growth. During the most recent recessions, wheat and beef income have both been in decline as has real wage and salary income—a consequence of a very weak aircraft market in Wichita. This combination has resulted in a substantial retrenchment in overall Kansas personal income.

To summarize, volatility in Kansas farm income is caused to an extent by factors outside of the typical business cycle. As such, farm income may counteract or reinforce the cyclical pattern of the Kansas nonfarm sector. During the 1960, 1970, and 1973-75 recessions, farm and nonfarm fluctuations tended to be broadly offsetting. Since 1980, however, they have declined together with devastating results for the Kansas economy.

Outlook

Nationwide, prices received for farm products rose an anemic 0.8 percent in November with the Prices Received Index standing at 129 (1977 = 100). In October, the Index had declined four points or 3.0 percent. In comparison to year-ago figures, prices received were down one point (0.8 percent) while prices paid were up six points (4.0 percent).

In terms of specific commodities, both hog

Table 1
Kansas Farm Prices

Commodity	Nov. 15 1982	October 1982	Pct. Change	November 1981	Pct. Change	November 1980	Pct. Change
Wheat, bu.	$ 3.30	$ 3.23	2.2%	3.95	−16.5%	$ 4.18	−21.1%
Corn, bu.	2.49	2.34	6.4	2.52	− 1.2	3.45	−27.8
Soybeans, bu.	5.12	4.81	6.4	5.77	−11.3	8.24	−37.8
Grain Sorghum, cwt.	3.80	3.69	3.0	3.74	1.6	5.46	−30.4
All Beef Cattle, cwt.	56.80	57.20	−0.7	55.50	2.3	60.10	− 5.5
All hogs, cwt.	50.20	54.70	8.2	40.40	24.3	44.90	11.8

and beef prices continued sharply downward (6.6 and 1.5 percent, respectively) after several months of sustained price improvement. Price increases for feed grains offset declines in meat. Corn in November averaged $2.20/bu., up $0.22. Sorghum also gained $0.22 to $3.92. Wheat prices were almost unchanged—rising only $.03 to $3.46.

Movement in Kansas farm prices mirrored the trends nationwide. Details are contained in Table 1 which compares present farm prices in Kansas to those of the previous month and two previous years. The table bears close examination. Prices rose in November for all major Kansas field crops and declined for both beef and hogs. The most striking drop has been in hog prices which have lost over $10.00/cwt. in three months since peaking in August at just over $60.00.

More significant, however, are comparisons of Kansas farm prices to their levels in the two prior years. These comparisons allow one to fully discern how substantially the terms of trade have moved against farmers during the '80s. Prices for all major field crops are down substantially (most in excess of 25 percent) from their levels two years ago. Only hog prices have risen over this period. Prices paid over this interim have risen only moderately (8.3 percent), easing farmers financial plight to some extent.

Cash receipts from farm marketings were up 9.0 percent in Kansas over the first seven months of the current year. Odds are good that farm income will continue to trend moderately above year-ago levels. This improvement, however, will be primarily due to increased production rather than any substantial firming in prices. The Kansas wheat crop, 51 percent above last year's, will be marketed at prices averaging about $0.20–0.30 below those of a year ago. Higher wheat receipts will be offset by slightly lower income from corn, sorghum, and soybeans marketing.

The sharp skid in beef and hog prices is not expected to continue. Prices for steers should average $60-64 through spring. Cattle on Kansas feedlots are at their highest level since January 1979. This level should provide increased marketings over the next several months, which, during October, were 10 percent above October 1981 levels.

In sum, receipts from both wheat and beef should rise modestly through summer 1983 and, by offsetting minor declines in receipts from other field crops, stimulate a modest improvement in overall farm receipts. Prices paid should continue to increase at a moderate pace.

Moderating interest rates should help to reduce the number of foreclosures and bankruptcies, but this problem will not substantially mitigate until some major price improvement is afforded. It is estimated that 2.1 percent of farmers in the Plains region quit business in the year ending in June 1982.

Nancy Brown Johnson, Research Assistant
Richard Sexton, Research Economist
The Institute for Economic
and Business Research

TABLE I. NATIONAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
A. INCOME MEASURES						
GROSS NATIONAL PRODUCT	BIL.'72$	(Q)	3RD	1481.2	0.8	-2.3
DISPOSABLE PERSONAL INCOME	BIL.'72$	(Q)	3RD	1060.9	2.3	1.7
PERSONAL CONSUMPTION	BIL.'72$	(Q)	3RD	207.6	-312.9	-78.4
GROSS PRIVATE INVESTMENT	BIL.'72$	(Q)	3RD	1458.1	2501.7	558.3
NET EXPORT OF GOODS & SERV.	BIL.'72$	(Q)	3RD	30.7	-82.7	-22.9
PERSONAL SAVINGS	BIL.'72$	(Q)	2ND	149.4	144.3	40.2
SAVINGS RATE*	%	(Q)	2ND	6.9	1.6	1.6
B. LABOR FORCE						
CIVILIAN LABOR FORCE	MIL.	(M)	OCT.	110.6	-4.1	3.4
EMPLOYED	MIL.	(M)	OCT.	99.1	-7.2	0.9
UNEMPLOYED	MIL.	(M)	OCT.	11.6	31.9	36.5
UNEMPLOYMENT RATES*						
ALL	%	(M)	OCT.	10.4	0.3	2.4
MEN	%	(M)	OCT.	9.8	0.2	3.1
WOMEN	%	(M)	OCT.	8.6	0.3	1.8
TEENS	%	(M)	OCT.	24.0	0.3	3.4
BLACKS	%	(M)	OCT.	20.2	0.	4.7
WHITES	%	(M)	OCT.	9.3	0.3	2.4
C. PRODUCTION						
INDUSTRIAL PRODUCTION		(M)	SEP.	137.3	-7.0	-10.6
DURABLE PRODUCTION		(M)	SEP.	122.8	-14.5	-14.4
HOUSING STARTS**	TH.	(M)	SEP.	1146.0	172.5	21.8
AUTO SALES		(M)	SEP.	8.3	110.5	-20.2
D. PRICES						
1. CONSUMER PRICES						
CPI-W, ALL ITEMS	1967=100	(M)	OCT.	293.6	3.3	5.0
CPI-U, ALL ITEMS	1967=100	(M)	OCT.	294.1	3.3	5.1
FOOD	1967=100	(M)	OCT.	279.9	-2.1	0.8
HOUSING	1967=100	(M)		321.2	1.5	5.8
APPAREL	1967=100	(M)	OCT.	194.6	3.1	1.6
TRANSPORTATION	1967=100	(M)	OCT.	297.0	0.4	3.4
MEDICAL	1967=100	(M)	OCT.	336.5	9.3	10.4
2. PRODUCER PRICES						
ALL COMMODITIES	1967=100	(M)	OCT.	299.9	1.6	2.5
INDUSTRIAL COMMODITIES	1967=100	(M)	OCT.	314.4	5.8	1.8
CRUDE MATERIALS	1967=100	(M)	OCT.	312.2	-15.6	-2.5
CAPITAL EQUIPMENT	1967=100	(M)	OCT	283.8	18.5	4.6
3. AGRICULTURAL PRICES						
PRICES RECEIVED	1977=100	(M)	NOV.	128.0	-9.3	-1.5
PRICES PAID	1977=100	(M)	NOV.	156.0	7.7	3.3
PARITY RATIO	1977=100	(M)	NOV.	83.0	0.	-3.5
E. BANKING AND FINANCE						
1. MONEY SUPPLY MEASURES						
M 1	BIL.$	(W)	NOV.28	474.5	-13.1	7.6
M 2	BIL.$	(M)	SEP.	1954.8	8.54	10.3
2. MONEY SUPPLY COMPONENTS						
CURRENCY	BIL.$	(W)	NOV.28	131.8	11.0	7.9
TOTAL CHECKABLE DEPOSITS	BIL.$	(W)	NOV.28	338.3	-21.2	N/A
TOTAL TIME DEPOSITS	BIL.$	(W)	NOV.28	843.7	-9.7	N/A
3. INTEREST RATES*						
PRIME RATE	%	(W)	DEC.7	11.5	-0.3	-4.5
DISCOUNT RATE	%	(W)	NOV.28	9.0	-0.5	-3.5
HOME MORTGAGE RATE	%	(M)	NOV.	13.0	-1.0	-3.2
90 DAY CD'S	%	(W)	DEC.7	8.8	0.1	-2.8
3 MONTH T-BILLS	%	(W)	DEC.7	8.3	0.4	-4.7

*NUMBERS IN PERCENT CHANGE COLUMN INDICATE ABSOLUTE CHANGE OF THE INDICATOR.

NOTE: PERCENT CHANGE COLUMN IN THIS TABLE INDICATES THE AVERAGE ANNUAL PERCENT CHANGE UNLESS INDICATED. ** INDICATES CHANGE IS NOT AT ANNUAL RATE.

TABLE II. GENERAL BUSINESS INDICATORS FOR KANSAS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MANUFACTURING						
AVERAGE WORK WEEK	HRS.	(M)	OCT.	39.5	-0.5	-2.5
AVERAGE WEEKLY EARNINGS	HRS.	(M)	OCT.	356.6	0.4	6.1
INITIAL CLAIMS FOR UNEMPLOYMENT INSURANCE	TH.	(M)	OCT.	19021.0	14.8	69.0
NEW INCORPORATIONS						
IN-STATE FOR PROFIT		(M)	OCT.	338.0	8.3	-22.3
OUT-OF-STATE FOR PROFIT		(M)	OCT.	103.0	39.2	-19.5

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
KANSAS SECRETARY OF STATE

TABLE III. EMPLOYMENT AND INCOME IN KANSAS

INDUSTRY			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL INDUSTRIES	TH.	(M)	OCT.	919.9	0.1	-4.0
MANUFACTURING	TH.	(M)	OCT.	159.2	-1.2	-13.5
DURABLE GOODS	TH.	(M)	OCT.	93.1	-1.8	-21.4
STONE, CLAY, GLASS	TH.	(M)	OCT.	6.4	0.	-7.2
PRIMARY METALS	TH.	(M)	OCT.	2.5	-13.8	-32.4
FABRICATED METAL PRODUCTS	TH.	(M)	OCT.	10.6	-0.9	-11.7
MACHINERY (INCL. ELEC.)	TH.	(M)	OCT.	25.7	-4.5	-26.1
TRANSPORTATION EQUIPMENT	TH.	(M)	OCT.	37.9	1.1	-22.5
AIRCRAFT AND PARTS	TH.	(M)	OCT.	29.1	1.7	-29.9
OTHER DURABLE GOODS	TH.	(M)	OCT.	10.0	-3.8	-18.0
NONDURABLE GOODS	TH.	(M)	OCT.	66.1	-0.3	0.9
FOOD AND KINDRED PRODUCTS	TH.	(M)	OCT.	25.2	0.8	7.7
MEAT PRODUCTS	TH.	(M)	OCT.	10.6	-0.9	19.1
APPAREL	TH.	(M)	OCT.	3.5	0.	0.
PRINTING AND PUBLISHING	TH.	(M)	OCT.	15.3	0.	1.3
CHEMICALS	TH.	(M)	OCT.	8.0	-2.4	-4.8
PETROLEUM AND COAL	TH.	(M)	OCT.	4.5	-2.2	-6.3
OTHER NONDURABLE	TH.	(M)	OCT.	9.6	-1.0	-6.8
MINING	TH.	(M)	OCT.	15.4	-11.5	-10.5
OIL AND GAS EXTRACTION	TH.	(M)	OCT.	15.4	0.7	-14.0
CONTRACT CONSTRUCTION	TH.	(M)	OCT.	37.3	0.	-10.3
TRANS., COMM., ELEC., GAS	TH.	(M)	OCT.	62.7	0.2	-4.1
WHOLESALE TRADE	TH.	(M)	OCT.	64.3	-1.2	-3.0
RETAIL TRADE	TH.	(M)	OCT.	161.0	0.6	-2.3
FINANCE, INSURANCE, REAL EST.	TH.	(M)	OCT.	48.0	0.8	0.4
SERVICES	TH.	(M)	OCT.	179.9	0.	-0.3
FEDERAL GOVERNMENT	TH.	(M)	OCT.	25.3	-0.8	-3.8
STATE AND LOCAL GOVERNMENT	TH.	(M)	OCT.	164.8	1.4	0.4
PERSONAL INCOME*	MIL.$	(Q)	2ND	27144.0	2.9	8.6

*PERCENT CHANGE COLUMN INDICATES AVERAGE ANNUAL RATE.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
BUREAU OF ECONOMIC ANALYSIS

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TABLE IV. CONSUMER PRICES--KANSAS CITY
CPI FOR ALL URBAN CONSUMERS (CPI-U)

CATEGORY		LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL ITEMS*	1967=100 (B)	OCT.	289.3	1.5	6.1
FOOD AND BEVERAGE	1967=100 (B)	OCT.	277.6	-0.2	2.8
HOUSING	1967=100 (B)	OCT.	309.3	2.8	7.2
APPAREL AND UPKEEP	1967=100 (B)	OCT.	203.0	-1.7	6.6
TRANSPORTATION	1967=100 (B)	OCT.	285.2	-0.5	2.4
MEDICAL CARE	1967=100 (B)	OCT.	353.8	3.2	16.5

*ALL PERCENT CHANGES ARE FROM TWO MONTHS PREVIOUS.

SOURCE: BUREAU OF LABOR STATISTICS

TABLE V. EMPLOYMENT AND SALES DATA FOR KANSAS, STATE AND AREAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
KANSAS--STATEWIDE						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	1214.3	-0.4	-0.8
EMPLOYED	TH.	(M)	OCT.	1142.4	-0.3	-3.1
FARM	TH.	(M)	OCT.	63.7	-6.0	-8.2
UNEMPLOYED	TH.	(M)	OCT.	71.9	-0.8	65.7
RATE*	%	(M)	OCT.	5.9	0.	2.4
RETAIL SALES	MIL.$	(M)	OCT.	1191.3	-72.9	5.8
WICHITA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	226.4	-0.1	0.2
EMPLOYED	TH.	(M)	OCT.	206.8	0.1	-5.1
FARM	TH.	(M)	OCT.	2.6	-3.7	0.
UNEMPLOYED	TH.	(M)	OCT.	19.6	-2.5	142.0
RATE*	%	(M)	OCT.	8.7	-0.2	5.1
RETAIL SALES	MIL.$	(M)	OCT.	239.6	5.8	1.9
KANSAS PORTION OF KANSAS CITY SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	278.4	-0.6	1.6
EMPLOYED	TH.	(M)	OCT.	265.4	-0.7	1.3
FARM	TH.	(M)	OCT.	1.4	-6.7	16.7
UNEMPLOYED	TH.	(M)	OCT.	12.8	-0.8	8.5
RATE*	%	(M)	OCT.	4.7	0.1	0.4
RETAIL SALES	MIL.$	(M)	OCT.	197.3	6.0	1.1
TOPEKA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	93.3	-0.1	-0.7
EMPLOYED	TH.	(M)	OCT.	87.7	-0.2	-1.7
FARM	TH.	(M)	OCT.	1.9	-5.0	0.
UNEMPLOYED	TH.	(M)	OCT.	5.6	1.8	16.7
UNEMPLOYMENT RATE*	%	(M)	SEP.	5.9	0.1	1.3
RETAIL SALES	MIL.$	(M)	OCT.	90.8	-0.2	16.0
LAWRENCE SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	35.1	1.2	-1.4
EMPLOYED	TH.	(M)	OCT.	33.6	0.9	-1.8
FARM	TH.	(M)	OCT.	0.8	-11.1	0.
UNEMPLOYED	TH.	(M)	OCT.	1.5	7.1	7.1
RATE*	%	(M)	OCT	4.3	0.3	0.4
RETAIL SALES	MIL.$	(M)	OCT.	25.6	5.2	5.2
RILEY COUNTY--MANHATTAN AREA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	22.4	0.9	3.2
EMPLOYED	TH.	(M)	OCT.	21.5	0.9	-0.9
FARM	TH.	(M)	OCT.	1.1	0.	0.
UNEMPLOYED	TH.	(M)	OCT.	1.0	15.3	22.5
RATE*	%	(M)	OCT.	4.3	0.5	0.6
RETAIL SALES	MIL.$	(M)	OCT.	18.1	5.4	12.2

TABLE V. EMPLOYMENT AND SALES DATA FOR KANSAS, STATE AND AREAS (CONT.)

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
RENO COUNTY--HUTCHINSON AREA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	31.1	-7.7	4.4
EMPLOYED	TH.	(M)	OCT.	29.1	-5.8	2.5
FARM	TH.	(M)	OCT.	1.3	-7.1	-7.1
UNEMPLOYED	TH.	(M)	OCT.	2.1	-27.6	50.0
RATE*	%	(M)	OCT.	6.6	1.9	1.9
RETAIL SALES	MIL.$	(M)	OCT.	31.9	5.5	4.0
CRAWFORD COUNTY--PITTSBURG AREA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	16.9	0.	0.
EMPLOYED	TH.	(M)	OCT.	15.8	-0.6	-1.9
FARM	TH.	(M)	OCT.	0.9	-5.6	-5.6
UNEMPLOYED	TH.	(M)	OCT.	1.1	0.	37.5
RATE*	%	(M)	OCT.	6.5	0.3	1.8
RETAIL SALES	MIL.$	(M)	OCT.	12.8	5.2	-7.2
LYON COUNTY--EMPORIA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	18.1	5.8	0.
EMPLOYED	TH.	(M)	OCT.	17.2	0.	-1.1
FARM	TH.	(M)	OCT.	0.9	-5.6	-5.6
UNEMPLOYED	TH.	(M)	OCT.	1.0	11.8	35.7
RATE*	%	(M)	OCT.	5.2	0.5	1.3
RETAIL SALES	MIL.$	(M)	OCT.	16.7	6.1	13.6
SALINE COUNTY--SALINA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	26.1	-0.4	-1.9
EMPLOYED	TH.	(M)	OCT.	24.3	0.	-3.6
FARM	TH.	(M)	OCT.	0.7	-2.7	4.3
UNEMPLOYED	TH.	(M)	OCT.	1.7	-1.1	44.2
RATE*	%	(M)	OCT.	6.8	0.1	2.3
RETAIL SALES	MIL.$	(M)	OCT.	29.6	2.5	4.1
BARTON COUNTY--GREAT BEND AREA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	19.7	0.5	7.1
EMPLOYED	TH.	(M)	OCT.	18.8	0.3	3.9
FARM	TH.	(M)	OCT.	1.0	-5.0	-5.0
UNEMPLOYED	TH.	(M)	OCT.	0.9	9.4	132.5
UNEMPLOYMENT RATE*	%	(M)	OCT.	4.7	0.4	2.5
RETAIL SALES	MIL.$	(M)	OCT.	28.8	3.2	-19.1
MONTGOMERY COUNTY--COFFEYVILLE AREA						
CIVILIAN LABOR FORCE	TH.	(M)	OCT.	20.6	-1.7	-5.9
EMPLOYED	TH.	(M)	OCT.	18.0	-1.7	-14.8
FARM	TH.	(M)	OCT.	0.6	-7.7	0.
UNEMPLOYED	TH.	(M)	OCT.	2.7	1.9	231.3
RATE*	%	(M)	OCT.	12.8	0.3	9.6
RETAIL SALES	MIL.$	(M)	OCT.	17.2	-1.0	-7.2

*ALL RATE CHANGES INDICATE ABSOLUTE CHANGES INSTEAD OF PERCENT.

NOTE: ALL RETAIL SALES FIGURES ARE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VI. KANSAS AGRICULTURAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
PRICES RECEIVED						
ALL FARM PRODUCTS	1967=100	(M)	OCT.	129.0	-2.3	-48.0
ALL CROPS	1967=100	(M)	OCT.	113.0	-4.2	-53.9
WHEAT	$/BU.	(M)	OCT.	3.2	-3.6	-16.5
SORGHUM GRAIN	$/CWT.	(M)	OCT.	3.8	-9.0	-1.8
CORN	$/BU.	(M)	OCT.	2.3	-2.1	-10.1
SOYBEANS	$/BU.	(M)	OCT.	4.9	-3.4	-15.3
ALL HAY	$/TON	(M)	OCT.	49.0	-5.8	-9.3
LIVESTOCK AND PRODUCTS	1967=100	(M)	OCT.	140.0	-0.7	-44.9
ALL BEEF CATTLE	$/CWT.	(M)	OCT.	57.2	46.3	48.6
STEERS AND HEIFERS	$/CWT.	(M)	OCT.	60.5	0.7	2.5
CALVES	$/CWT.	(M)	OCT.	60.1	-3.5	-5.1
HOGS	$/CWT.	(M)	OCT.	55.6	-7.8	29.6
MILK		(M)	OCT.	14.2	2.9	-0.7
PRICES PAID						
HOG CONC. (38%-42%)	$/CWT.	(M)	OCT.	13.5	-4.9	-6.9
BEEF CATTLE CONC. (32%-36%)	$/CWT.	(M)	OCT.	11.0	0.	0.
MILK/FEED PRICE RATIO		(M)	OCT.	1.5	-0.7	-1.3
FARM INCOME	MIL.$	(Q)	1ST	N/A	N/A	N/A

SOURCES: FARM FINANCE, KCLRS
CROPS, KCLRS
LIVESTOCK ON FEED, KCLRS
BUREAU OF ECONOMIC ANALYSIS

TABLE VII. RETAIL SALES SUBJECT TO SALES TAX BY BUSINESS CLASSIFICATION*

BUSINESS CLASSIFICATION			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
APPAREL	MIL.$	(M)	OCT.	32.6	4.9	7.0
AUTOMOTIVE	MIL.$	(M)	OCT.	217.3	4.2	4.1.
FOOD	MIL.$	(M)	OCT.	298.8	3.9	12.0
FURNITURE	MIL.$	(M)	OCT.	47.2	3.7	1.4
GENERAL MERCHANDISE	MIL.$	(M)	OCT.	170.8	1.3	6.2
LUMBER & BUILDING MATERIALS	MIL.$	(M)	OCT.	95.8	6.9	4.5
PROF. & PERSONAL SERVICE	MIL.$	(M)	OCT.	58.8	1.6	18.5
PUBLIC UTILITIES	MIL.$	(M)	OCT.	65.7	9.1	15.3
UNCLASSIFIED	MIL.$	(M)	OCT.	114.4	1.9	5.7
FARM AND GARDEN PRODUCTS	MIL.$	(M)	OCT.	1.1	19.3	17.1
MANUFACTURING AND TRADING	MIL.$	(M)	OCT.	83.3	5.8	24.2
MISCELLANEOUS	MIL.$	(M)	OCT.	4.7	-3.8	32.5
TOTAL	MIL.$	(M)	OCT.	1191.4	4.0	6.0

*ALL FIGURES ARE THE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VIII. BANKING AND FINANCIAL ACTIVITY IN KANSAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MEMBER COMMERCIAL BANKS						
STATEWIDE						
TOTAL LOANS	MIL.$	(M)	OCT.	4136.0	1.0	9.5
TOTAL DEPOSITS	MIL.$	(M)	OCT.	6875.0	-0.5	6.9
DEMAND DEPOSITS	MIL.$	(M)	OCT.	1700.0	-1.0	-4.5
TIME AND SAVINGS	MIL.$	(M)	OCT.	5175.0	-0.3	11.3
KANSAS CITY, KANSAS*						
TOTAL LOANS	MIL.$	(M)	OCT.	208.0	1.0	7.2
REAL ESTATE	MIL.$	(M)	OCT.	25.2	0.8	26.0
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	OCT.	50.9	-9.0	6.0
CONSUMER	MIL.$	(M)	OCT.	41.7	-0.5	-9.3
TOTAL DEPOSITS	MIL.$	(M)	OCT.	336.7	-1.6	5.5
DEMAND DEPOSITS	MIL.$	(M)	OCT.	95.8	1.0	-3.2
TIME AND SAVINGS	MIL.$	(M)	OCT.	240.9	-2.5	10.0
TOPEKA*						
TOTAL LOANS	MIL.$	(M)	OCT.	276.5	0.	7.6
REAL ESTATE	MIL.$	(M)	OCT.	51.8	1.3	17.7
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	OCT.	135.6	-0.5	17.9
CONSUMER	MIL.$	(M)	OCT.	49.6	0.4	18.1
TOTAL DEPOSITS	MIL.$	(M)	OCT.	408.6	-6.4	-11.2
DEMAND DEPOSITS	MIL.$	(M)	OCT.	152.9	-2.1	-10.1
TIME AND SAVINGS	MIL.$	(M)	OCT.	255.7	-8.8	-12.1
WICHITA*						
TOTAL LOANS	MIL.$	(M)	OCT.	808.0	0.6	9.6
REAL ESTATE	MIL.$	(M)	OCT.	112.6	-1.1	-0.4
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	OCT.	368.6	0.0	16.6
CONSUMER	MIL.$	(M)	OCT.	226.2	6.9	4.2
TOTAL DEPOSITS	MIL.$	(M)	OCT.	1221.1	-1.1	3.3
DEMAND DEPOSITS	MIL.$	(M)	OCT.	474.0	-1.5	-3.7
TIME AND SAVINGS	MIL.$	(M)	OCT.	747.0	-0.8	8.3
SAVINGS AND LOANS--STATEWIDE						
LOANS MADE	MIL.$	(M)	OCT.	61.1	-14.3	24.4
NET GAIN IN SAVINGS**	MIL.$	(M)	OCT.	-61.0	-33.8	-80.1
SAVINGS AND LOANS--CITIES						
KANSAS CITY, KANSAS						
LOANS MADE	MIL.$	(M)	OCT.	11.1	236.4	60.9
NET GAIN IN SAVINGS**	MIL.$	(M)	OCT.	0.6	0.9	5.4
TOPEKA						
LOANS MADE	MIL.$	(M)	OCT.	11.9	124.5	70.0
NET GAIN IN SAVINGS**	MIL.$	(M)	OCT.	-20.2	-4.0	-23.1
WICHITA						
LOANS MADE	MIL.$	(M)	OCT.	16.1	78.9	37.6
NET GAIN IN SAVINGS**	MIL.$	(M)	OCT.	-15.8	-6.5	-24.4

*ONLY LARGE COMMERCIAL BANKS ARE INCLUDED.

**NUMBERS IN PERCENT CHANGE COLUMNS INDICATE ABSOLUTE CHANGE.

TABLE IX

BANKING AND FINANCIAL ACTIVITY IN KANSAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
AGGREGATED STATEWIDE DATA						
STATEWIDE						
TOTAL LOANS	MIL.$	(Q)	2nd	9174.0	2.1	7.8
TOTAL DEPOSITS	MIL.$	(Q)	2nd	14,956.0	-.4	5.3
DEMAND DEPOSITS	MIL.$	(Q)	2nd	3212.5	-2.7	11.4
TIME AND SAVINGS	MIL.$	(Q)	2nd	11,743.4	13	11.0
KANSAS CITY, KANSAS*						
TOTAL LOANS	MIL.$	(Q)	2nd	1454.0	3.1	8.3
REAL ESTATE	MIL.$	(Q)	2nd	509.5	2.3	8.1
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	2nd	397.4	3.7	13.8
CONSUMER	MIL.$	(Q)	2nd	371.6	1.0	1.6
TOTAL DEPOSITS	MIL.$	(Q)	2nd	2250.2	1.2	5.2
DEMAND DEPOSITS	MIL.$	(Q)	2nd	454.2	.8	-6.7
TIME AND SAVINGS	MIL.$	(Q)	2nd	1795.9	1.3	8.7
TOPEKA*						
TOTAL LOANS	MIL.$	(Q)	2nd	612.0	2.0	6.8
REAL ESTATE	MIL.$	(Q)	2nd	136.6	-0.1	0.4
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	2nd	237.9	2.1	17.1
CONSUMER	MIL.$	(Q)	2nd	119.4	-4.3	-12.3
TOTAL DEPOSITS	MIL.$	(Q)	2nd	938.4	-2.8	2.2
DEMAND DEPOSITS	MIL.$	(Q)	2nd	237.1	-6.5	-21.3
TIME AND SAVINGS	MIL.$	(Q)	2nd	698.3	-1.5	13.7
WICHITA*						
TOTAL LOANS	MIL.$	(Q)	2nd	1419.1	2.8	9.8
REAL ESTATE	MIL.$	(Q)	2nd	333.3	1.5	3.5
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	2nd	665.3	5.5	17.1
CONSUMER	MIL.$	(Q)	2nd	359.0	1.4	-0.9
TOTAL DEPOSITS	MIL.$	(Q)	2nd	2358.9	.6	-0.1
DEMAND DEPOSITS	MIL.$	(Q)	2nd	748.7	-1.4	-12.6
TIME AND SAVINGS	MIL.$	(Q)	2nd	1610.2	1.6	7.0

*This table includes data for all those commercial banks in Kansas required to report transactions to the Federal Reserve or the FDIC. It represents, therefore, a much more comprehensive, but less timely, compilation than that reported in Table VIII.

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COMPOSITE INDEXES

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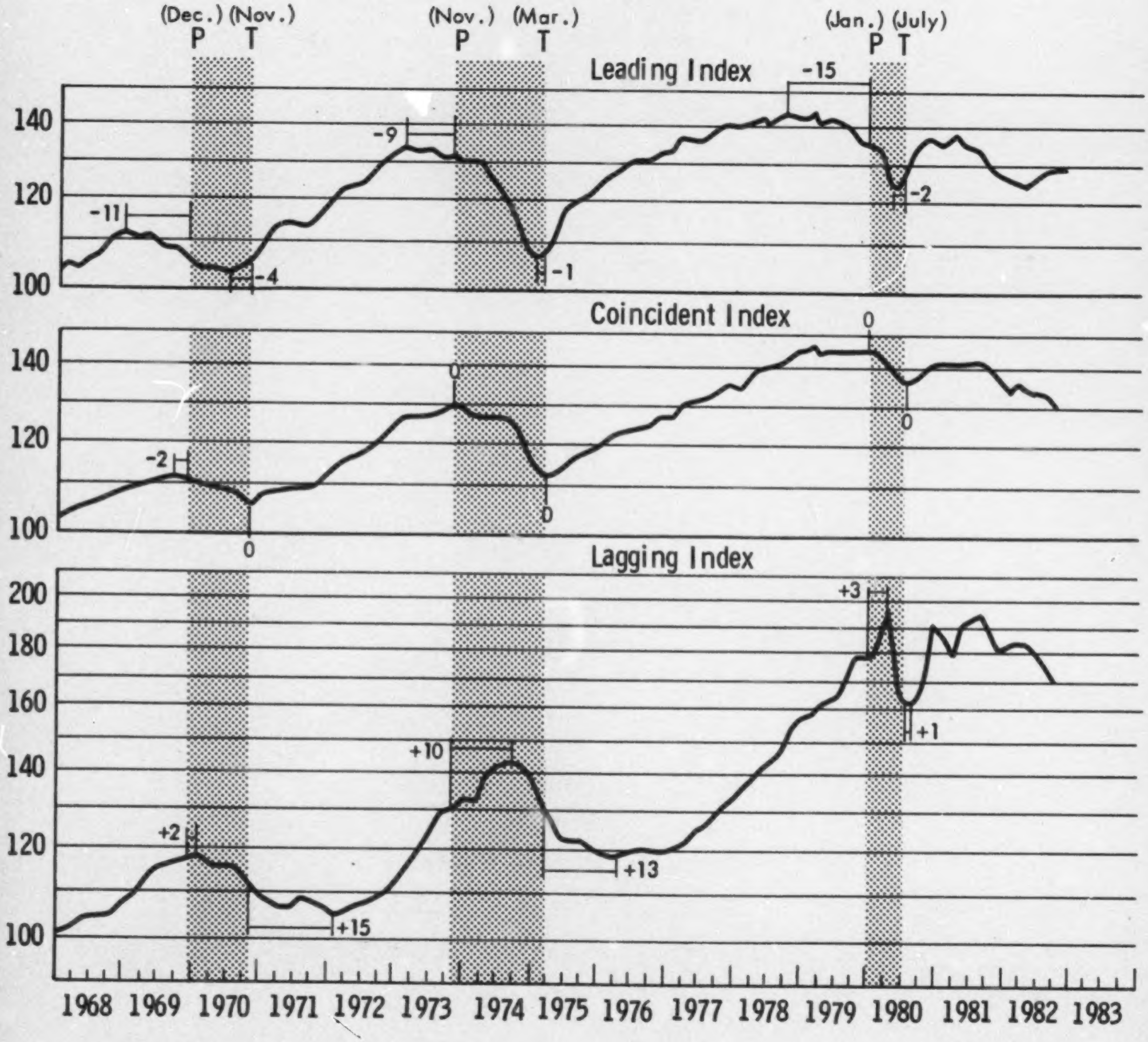

The University of Kansas
Kansas Business Review
November-December 1982 Vol.6 No.2
Published bimonthly by the University
of Kansas, The Institute for Economic
and Business Research, Lawrence, Kansas 66045

Nonprofit Organization
U.S. Postage
PAID
Lawrence, Kansas
Permit No. 65

CONGRESSIONAL INFO SERVICES/SRI
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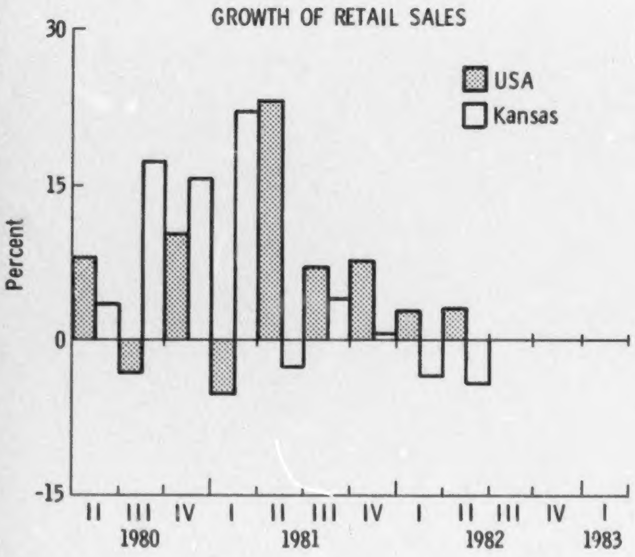
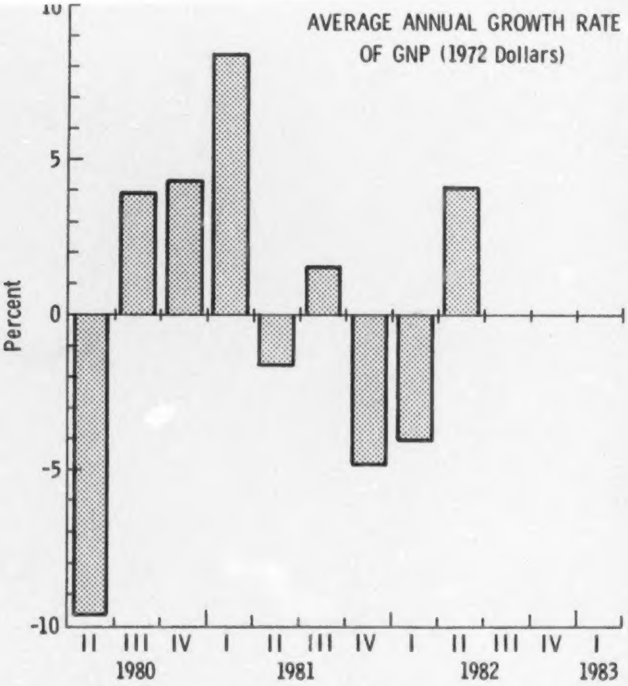

GROWTH OF RETAIL SALES


AVERAGE ANNUAL GROWTH RATE
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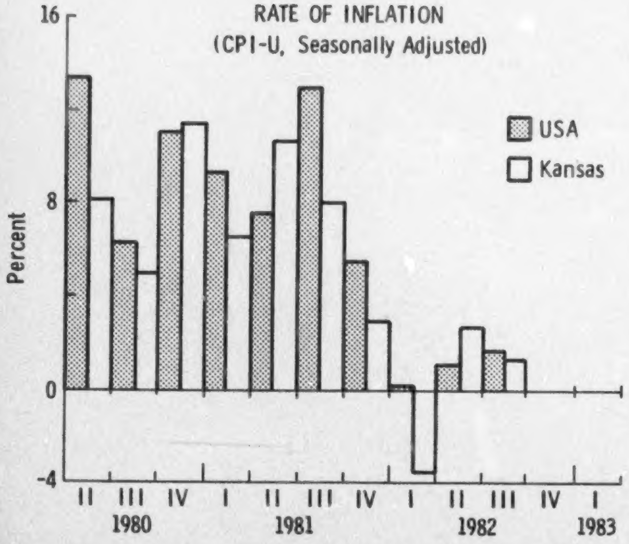
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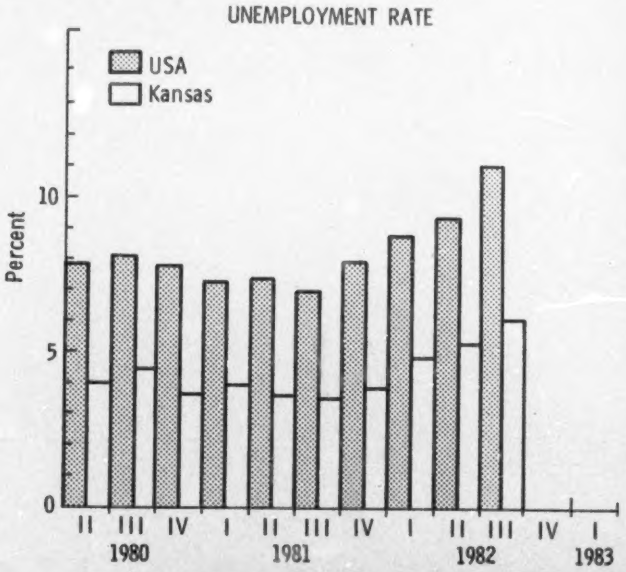
(CPI-U, Seasonally Adjusted)


UNEMPLOYMENT RATE

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January-February 1983

KANSAS BUSINESS REVIEW

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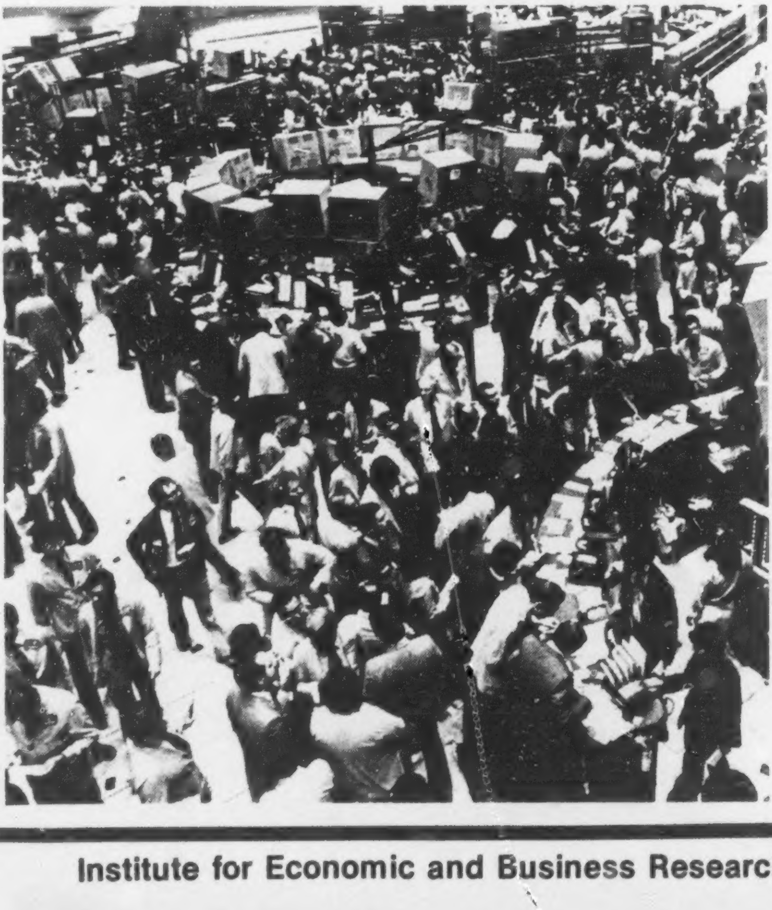

Economic Conditions
Economic Indicators

Institute for Economic and Business Research, The University of Kansas

KANSAS BUSINESS REVIEW

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Kansas Business Review (KBR) is published five times a year. *KBR* is published by the Institute for Economic and Business Research, 319 Raymond Nichols Hall, The University of Kansas, Lawrence, Kansas 66045. It is designed by the Division of Publications, Office of University Relations.

Manuscripts for publication in *Kansas Business Review* are solicited from readers and should be sent to the editors for consideration.

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The 1983 Economy: Principles and Policies

What makes this current recession so bad . . . is that it started very close to the bottom of the previous recession.

Alan Blinder

Professor Alan Blinder of Princeton University enjoys a national reputation as an expert in fiscal and monetary policy, income distribution theory, and stabilization policy. He received his bachelors degree at Princeton, his M.S. from the University of London, and his Ph.D. from the Massachusetts Institute for Technology. Dr. Blinder is co-author of *Economics: Principles and Policy*, considered by many readers the best introductory text to economics. In his own right, he is the author of *The Economics of Public Finance*, *Economic Policy and the Great Stagflation*, and *Towards an Economic Theory of Income Distribution* as well as numerous articles in such journals as *Quarterly Journal of Economics*, *Journal of Public Economics*, and *Journal of Monetary Economics*. In 1975, he was Assistant Director of the Congressional Budget Office and currently is a member of The Brookings Institution. Dr. Blinder was the luncheon speaker at the Economic Outlook Conference—1983 held at the University of Kansas in December. The following article is an edited transcript of his address.

Introduction

To open, I will take a rather quick survey of the state of the current economy—which is not very good as you know. Following that review, I will look backward a bit to see how the present economic situation developed and then look forward to determine where the economy seems likely to go. To conclude, I will discuss the reasons why most economists think a recovery is imminent and how right or wrong that forecast might be.

Current Conditions

In respect to our immediate situation, one major point to remember is that the current decline of the U.S. economy is not unusually severe for a recession. For example, real gross national product (GNP) has fallen only about 2.6 percent, real final sales only 2.0 percent. What makes this current recession so bad, however, is that it started very close to the bottom of the previous recession. In essence and in effect, the economy has suffered a "double whammy" recession. Indeed, in my view, the U.S. economy has been in a stagnant state—or more or less a state of recession—for about three years. In fact, real GNP in the third quarter of '82 was just about where it was in the first quarter of '79. That is three years at zero growth.

Presently, the unemployment rate is 10.8 percent (December, 1982). That figure excludes the so-called discouraged workers, those who have given up looking for work because they haven't been able to find it. Counting them adds about another 1.6 percent, bringing the unemployment rate up to approximately 12.5 percent. As well, something like 5.0 to 6.0 percent of the labor force is working part-time because they cannot find full-time work. Just by way of comparison, in July of '81—a year and a half ago—the unemployment rate was 7.2 percent. So, unemployment moved from 7.2 to 10.8 percent in a year and a half.

With respect to capacity utilization, the Federal Reserve index for manufacturing in October was 68 percent which contrasts strikingly to the 80 percent figures in the middle of 1980. The Federal Reserve considers something in the 85 to 88 percent range to be normal. Capacity utilization rates across different industries show that the decline in production, which at first was concentrated in relatively few industries, is, by now, fairly well spread. Since the middle of 1981, industrial production of primary metals is down 34 percent, down 21 percent in autos, down 21 percent in nonelectrical machinery; and so it goes across the various industries. Only a very few, if any, have held out to this stage and not been victims of the recession.

Real business-fixed investment is down about 7.5 percent from its peak and is now standing at 1978 levels. I want to repeat that "at 1978 levels." This is 1982, and, despite all the investment incentives that have been enacted, we are now at the investment level of four years ago. This absence of growth is a striking example of the effects of the recession. Residential investment is, of course, in much worse shape than business-fixed investments: so far in 1982, residential investment is running at the lowest rate since 1970, twelve years ago.

The real disaster areas in the current economic landscape are revealed by the numbers for private, single housing starts which, so far in 1982, are running at less than one half of their 1977 peak, for domestic auto sales which are at the lowest point in 20 years, and for steel which is producing under 20 percent of its capacity. I think the best way to sum up the state of the economy today is as President Reagan did the other day: "It's a helluva mess."

Table 1
The Recession Under Two Different Definitions (Latest Data: 1982:3)

	(1) From the GNP Peak (1981:3)	(2) From the Final Sales Peak (1981:1)
1. Change in GNP	−32.0	−29.4
2. Change in Final Sales	−17.9	−29.4
3. Consumption	+6.3	+6.6
4. Fixed Investment	−14.1	−16.6
5. Gov't Spending	+3.6	+3.2
6. Net Exports	−13.5	−22.5
7. Change in Inventory Accumulation	−14.1	−0.1

An Anatomy of the Recession

The National Bureau of Economic Research in Cambridge, Massachusetts is generally the official arbiter of dates of recession, and they have not yet spoken on the current dating. The conventional view, however, is that the peak came in the third quarter of 1981. Table 1 details the effects of the recession as figured from two different start dates, third quarter 1981 and first quarter 1981. The first column indicates how the recession looks dated from the third quarter of 1981; that is, from the quarter when real GNP peaked. This view shows that the decline in GNP came about equally from the saving in inventories, the drop in fixed investments, and the decline in net exports. Further, this perspective upon the recession shows that current GNP is running a little bit ahead of the low recorded in first quarter 1982.

But I prefer to look at the recession differently by taking away the inventory swings which are very volatile and often cloud the picture and by dating the recession from when final sales peaked—first quarter of 1981. Comparing the data from the revised date with those in the first column shows that the total decline of GNP is much the same but that the composition is quite different. Inventory contributes nothing, for example. Instead, we see very large drops in fixed investments—mainly housing—and in net exports. Moreover, defining the recession by real final sales shows that the most recent quarter was lower than the previous quarter, that it, in turn, was lower than the preceding quarter, and so on. Basically the economy has been declining for about six quarters, and it doesn't look like the bottom has yet been hit.

This recession was designed to bring down inflation, and, in fact, inflation has been brought down: a year ago, the Consumer Price Index (CPI) inflation rate for the previous 12 months was 10.2 percent (Dec. '80-Dec. '81); for these last 12 months, the rate is 5.1 percent. Clearly, inflation has not been vanquished from the land, but the gains against it have been substantial, they have been real, and they are going to last. However, having said all that, I would like to point out that the gains are easily exaggerated by looking at the yearly rates of inflation as depicted in Table 2. For example, comparing 1980 to October 1982 inflation rates shows a decline of seven percentage points, from 12.4 to 5.4. That comparison creates a very distorted view, however, because of the very volatile behavior of the special factors enumerated on lines 2, 3, and 4 of that table: food, energy, and mortgage interest costs. The table lists the contribution to the total CPI increases for 1979, 1980, 1981, and October 1982 of food, energy, and mortgage interest costs, and then line 5 accounts for "everything else"—that is, the contribution of everything in the price index except those three items. What is left is about 61 percent or 62 percent of the total index. Taking these exceptions into account and recalculating the inflation rates from 1980 to October 1982 shows that the contribution of food to total inflation has gone down by 1.1 percent, the contribution of energy by 1.6 percentage points, and the contribution of mortgage interest costs by 2.5 percentage points. The "everything else" —all that we think of as coming out of the industrial sector of the U.S. economy—has gone down only 2.0 percentage points.

Perhaps a more natural way to look at that number is to translate it into line 6; that is, rather than look at the contribution of that 60 percent, let's ask the question of what was the average inflation rate within that 60 percent of the price index. What is seen is that the rate of inflation was 9.9 percent in 1980—that was the peak—and that it was 7.0 percent in October 1982, rather a larger number than 5.4. I like to use this number as the measure of the so-called baseline or underlying rate of inflation, and the point is that the special factors working very much against us in 1979-80 pushed the actual rate of inflation

. . . despite all the investment incentives that have been enacted, we are now at the investment level of four years ago.

Figure 1
Economic Growth During Years of Declining Inflation

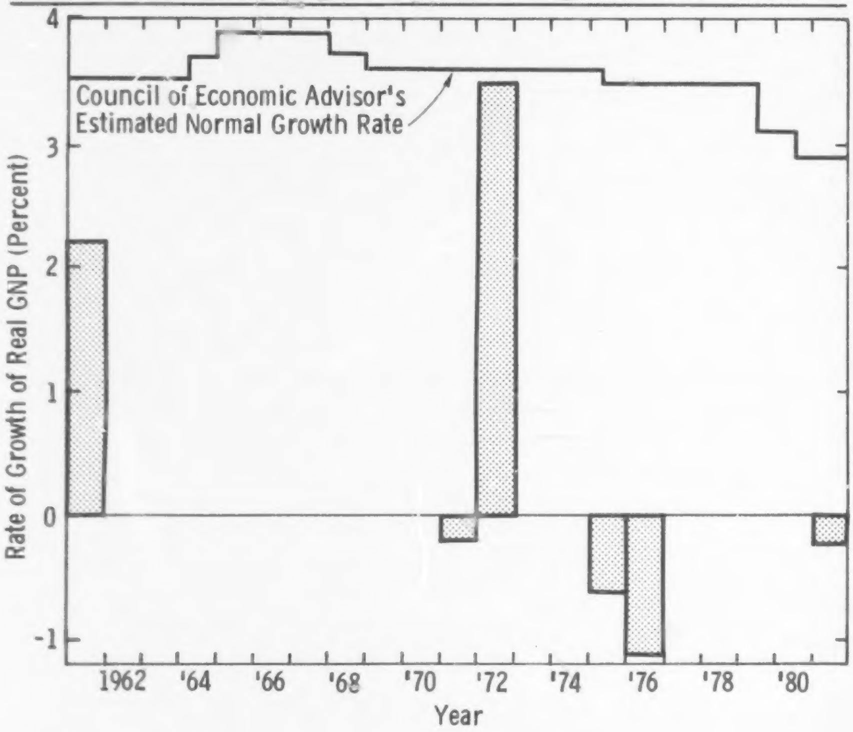


Table 2
The Decline of CPI Inflation (1979-1982)

	1979	1980	1981	1982 through October
1. Rate of inflation of CPI	13.4%	12.4%	8.9%	5.4%
Contributions of:				
2. Food	1.9	1.8	0.7	0.7
3. Energy	3.2	1.9	1.3	0.3
4. Mortgage Interest Cost	2.5	2.4	2.0	0.1
5. Everything Else	5.8	6.3	4.9	4.3
6. Rate of inflation of "Everything Else"	8.7	9.9	8.0	7.0
7. Line 1 minus line 6	4.6	2.5	0.9	−1.6

well above the baseline and that, in 1982, they worked very much in our favor, pushing the actual rate of inflation down relative to the baseline. The genuine decline in the inflation rate, therefore, was about 3.0 percentage points according to this adjusted computation. From 9.9 to 7.0 percent: that is what was really accomplished; the rest is transitory.

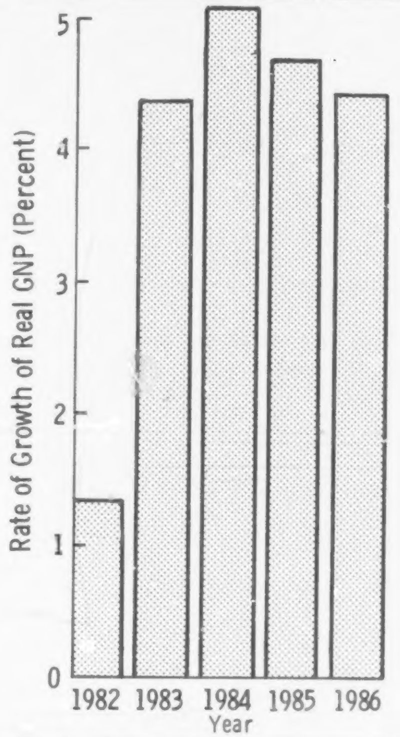
The Creation of the Recession

Now I would like to address the question that I raised at the onset: How did we get into this mess? The present situation, of course, is not what the Reagan team told us to expect two years ago. In fact, back then they painted a rather beatific vision of how the economy was going to be very good; how we were going to have painless disinflation; and how we were going to have low interest rates, falling unemployment, and rapid economic growth. The only part of that scenario that has turned out to be right was the falling inflation.

I think it is worth taking just a few minutes to review the promises of Reaganomics and the reasons why the critics at the time claimed that the policy was "pie-in-the-sky" economics. More specifically, by looking at two major inconsistencies in the original Reagan forecasts, we can get a better sense of what went wrong, why we are where we are now, and where we will be in the future. The first inconsistency concerns the inflation-GNP growth trade-off as conceived in the original program. The bars in Figure 1 mark the years from 1961 to 1981 in which inflation fell; the rest of the graph is blank, representing years of rising inflation. The height of the bar represents the real growth rate of GNP the previous year. This graph, then, depicts the idea that there is a trade-off between real growth and inflation: historically, when you do well fighting inflation, you do poorly sustaining real growth. The black line is the Council of Economic Advisors' estimates of the normal growth rates of the economy and shows that not one of those years reached the normal rate and that in most of those years negative growth was recorded. The point is that past history did not augur favorably for the Administration's claims that inflation would be brought down while still enjoying exuberant real growth.

Figure 1, then, shows the history. Now I would like to refer to Figure 2 which shows the Reagan team's forecast from February '81 in their original economic document. A lot of you are laughing at how optimistic—how naively optimistic—that forecast was. At the time, most economists didn't know whether to laugh or cry. The majority of economic analysts knew that the Reagan forecast was either far too optimistic on how fast inflation was going to fall—if the economy was going to grow as predicted, then rising, not falling, inflation would be the result—or that it was far too optimistic on real growth—if the economy was going to enjoy the predicted decline in inflation, then it would not enjoy the predicted high levels of growth. In February '81, no one could say which of the two optimistic forecasts would go wrong. Now, of course, we know. We have the decline in inflation that the Administration said we would, and, in fact, we have even more. But we have not had the promised growth. We know 1982 is going to come in with a real GNP decline in the vicinity of 1.0 percent. Moreover, the Administration originally projected 1983 growth at near 5.0 percent (see Figure 2); its current estimate is about 4.0, and I am going to suggest shortly that this forecast is a bit high—that 4.0 is most unlikely.

Figure 2
Original Reagan Administration Projections of Economic Growth (February 1981)

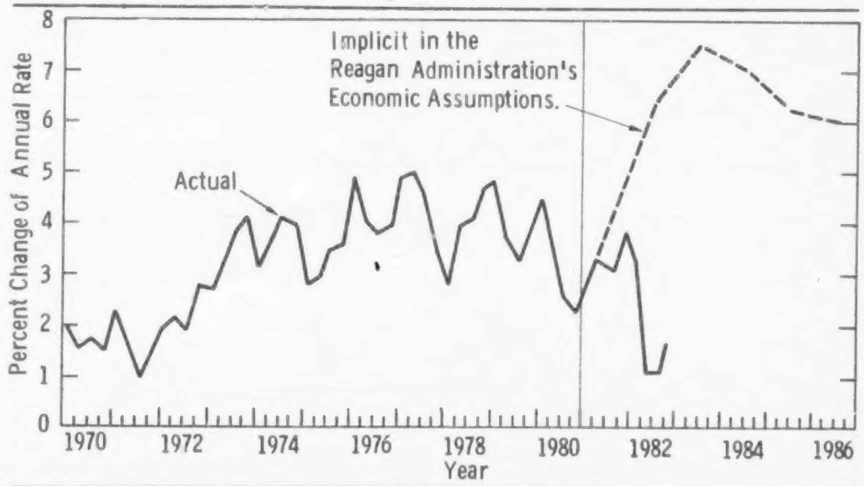


This recession was designed to bring down inflation.

The second inconsistency has to do with the Administration's monetary policy. The velocity of money (the rate at which money turns over) is depicted in Figure 3 in which the solid line represents actual performance and the dashed line projections implicit in the Reagan Administration's assumptions. To the left of the vertical line is the percentage change in velocity averaged over two-year periods from 1970 to 1980. The dashed line vividly depicts the sharp increase in velocity that the Reagan Administration claimed would happen, a claim necessarily demanded by a policy that promises rapid growth of GNP, slow growth in the money supply, and falling interest rates. Economists at the time said that such a claim was absolutely fantastic, and the line to the right in the graph bears them out. Money did not turn over at the degree of velocity promised which means that a terribly severe monetary crunch resulted. All of which was perfectly predictable.

Administration spokespersons, however, have repeated many, many times that the recession came as a big surprise. The plain fact, however, is that almost every forecaster outside of the Administration in the summer of 1981 was looking for the onset of recession. The economy was already weak; remember that the Federal Reserve under Paul Volker had been pursuing a tight money, high

Figure 3
Percent Change in the Velocity of MI From Two Years Earlier



interest rate policy almost unrelentingly since late 1979. That is, well before President Reagan came into office. Not surprisingly, the great majority of economists in mid-1981 were not looking for exuberant growth in the economy; rather, they were marveling at the fact that somehow the economy was limping along and not being completely hammered into the ground by these high interest rates. Moreover, most economists did not really understand how or why the economy was doing as well—which was not all that well—as it was doing. Remember also that the recession began concentrated in the construction and automobile industries, exactly those industries most heavily impacted by tight money and high interest rates. So there is no question of the preeminent role of tight money in bringing on this recession.

Another aspect which has been largely ignored is recent tight fiscal policy. Although the popular perception may be to the contrary, fiscal policy tightened very substantially between 1980 and 1981. The high employment budget (what the budget would be given the current fiscal program *if* the economy was at full employment), for example, swung from a deficit of about 20 billion dollars in the first half of 1980 to a surplus of about 16 billion in the first half of 1981. That is a swing of about 35 billion dollars of fiscal contraction within a year. This, however, was not the Reagan program, but, rather, it was the legacy of the Carter Administration's program which had turned toward tight fiscal policy to fight inflation during its last years. The Reagan program, of course, represented substantial fiscal stimulus, but it was delayed until late in 1981 and was trivial at that point. Indeed, by the end of 1981, we had seen almost nothing of the actual economic effects of the Reagan economic program. Importantly, the biggest stimulus in that program does not start, in fact, until 1983, when Phase Three of the tax cut takes hold and becomes progressively expansionary due to indexing. That is the reason for the so-called structural deficit that you hear so much about lately, and that is where the effects of this program on the budget are really felt. So all the shouting about fiscal stimulus and monetary restraint was really shouting about current and past monetary restraints and projected future fiscal stimulus. Well, a bright school boy knows that what you get from pile-driving the economy down by a policy of monetary restraints and promising to prop it up in two years by fiscal policy is a recession. And that is exactly what we got.

Another major factor that has been generally overlooked was the very large decline in exports resulting from the tremendous increase in the value of the U.S. dollar in the past two years: since the third quarter of 1980, the dollar has risen about 40 percent against the trade-weighted average. Think about that number. What it means to a foreigner is that everything has gone up 40 percent in the last year—an astounding figure—and, with some lag time, such a figure takes a toll on exports and encourages imports. As shown earlier in Table 2, net exports registered as one of the two big weak spots in sales in this recession. Just to cite some numbers: in 1972 constant purchasing power dollars, net exports (the excess of exports over imports) fell from 51 billion dollars in 1980 to 33 billion so far in 1982 (December). That is a huge decline, and maybe the following way of putting it is even more dramamtic: real exports are presently down to where they were in the third quarter of 1979 while real imports, despite the recession, are at an all-time high.

The Administration has adopted a very consistent forecast, which it has stuck with now for over a year: "The recovery will start three months from now."

From looking at real imports, one might say that there has been no recession. Of course, real imports look good because foreign goods have become a lot cheaper whereas American goods have become a lot more dear. This development in trade was predictable a year ago—it was happening a year ago—and is bound to get worse because there are substantial lags in world trade. International companies do not react instantaneously to changes in currency values, and the dollar's continued appreciation throughout 1982 will hurt our export performance in 1983 and 1984—one strong cause for pessimism about the near-turn outlook.

Another part of the Administration's line of "don't-blame-us-for-the-recession" has been to blame the Federal Reserve for clamping down too hard. The Administraiton has taken this line in spite of the fact that cheerleading for a tighter money policy based on monetarist operating procedures was a major plank in their original program. I would like to examine some numbers with you in order to investigate this claim that an extraordinary and unexpected tightening of monetary policy caused the Administration's plan to go wrong. Let's look at the growth rate of M1 in Table 3 for evidence.

Table 3
Growth Rates of the Money Supply

	M1	M2
Dec. 1979-Dec. 1980 (the legacy)	6.6%	9.0%
Dec. 1980-Dec. 1981	6.4	10.1
First 9 months of 1982	6.0	9.8

During 1980, M1 grew 6.6 percent, the legacy inherited by the Reagan Administration. During 1981, M1 grew 6.4 percent, a smaller number but not significantly smaller. And what do you think M1 was in the first few months of 1982? 6.0 percent—that's the incredible monetary crunch. An 0.6 percent decline hardly looks like the result of a Draconian monetary policy. Now it is true that there have been incredibly wild swings from month to month in the money supply, but it is also true that not one shred of evidence supports the proposition that short-term gyrations in money growth have any economic effect anywhere outside lower Manhattan. Indeed, they do have a profound effect in lower Manhattan but nowhere else; certainly, not in Kansas. The effects do not even reach New Jersey. The figures showing year-over-year growth are those indicative of the health of the economy, and they hardly indicate a severe monetary crunch.

However, these figures do not mean that money has *not* really been tight. No, of course not; everybody knows that money has been tight because they can see what interest rates are. Interest rates have been extraordinarily high, so what these M1 numbers really point out is the folly of conducting monetary policy solely on a monetarist basis which says that *all* one looks at is the growth rate of M1. Particularly so in a period when the demand for money has been shifting vertically due to financial innovations: it simply makes no sense, when the demand for money is fluctuating abruptly and unpredictably, to say that what we should do is make sure the supply of money grows smoothly.

The Outlook

I now come to the question that is on everybody's mind: Has the economy bottomed out? As you know, the signals at present are extremely mixed. Some observers think we have, others think we haven't, as has been the case for months. Certainly, no strong evidence exists that we have turned the corner, and, recently, the *Survey of Purchasing Agents,* which has been a very good forecasting device in the last few years, gave a rather pessimistic reading, suggesting that we are still going downhill. On the other hand, the Administration has adopted a very consistent forecast, which it has stuck with now for over a year: "The recovery will start three months from now." Administration spokespersons have been making that forecast for about 15 months, and they still are although I understand that some are now talking about four to six months. To me, that forecast sounds rather like the old "prosperity is around the corner," which is a bit frightening.

My own view is that the economy must now be very close to the bottom. Maybe the bottom was in November, maybe it is right now, or maybe the bottom will be reached in January; nobody can tell at this time, and it doesn't matter either because the economy is either right at the bottom or extremely close to the bottom. The danger is that the national economy will not rebound very strongly from the bottom whether we hit it in November, December, January, or even February. What *is* abundantly clear is that only an eternal optimist could see the economy presently poised on an exuberant boom. One would have to look at the world through very, very rose-colored glasses to see that kind of economic renaissance.

Now the current consensus, to the extent that there is one outside of the Administration, is looking for about 3.0 percent real growth in the coming year. I can go along with the consensus, although I would prefer to shade it in a pessimistic direction—maybe more like 2.0 percent real growth. Furthermore, I fear that most of the risk is on the down side rather than on the up side. If the consensus is wrong, its far more likely that the economy will do worse than it says and not better. It is important to note that if we do get 3.0 percent real growth in '83, it will not be enough to reduce unemployment one iota. So, 3.0 percent real growth keeps the unemployment rate right where it is, above 10 percent, and, if we are talking about the economy growing like that, we are also talking about double-digit unemployment for several years, a grim prospect to contemplate. And Martin Feldstein, Chairman of the Council of Economic Advisors, has said that we may be looking at an unemployment rate above 7.0 percent for five or six years. That is also a frightening prospect. If our economy does follow this scenario, then historians in the 21st century will look back and wonder why people allowed the Great Depression of the '80s to happen. Well, that is not very good news, but let me give you the good news before talking about some more bad news.

I remain very optimistic about inflation. As seen in Table 1, the baseline rate of inflation for 1982 so far has been 7.0 percent, and it is clearly falling. With unemployment staying as high as it is now or anywhere close, inflation is almost certain to continue to decline. The baseline rate inflation for 1983 could quite plausibly be forecast at 5.0 percent. Regarding the special inflationary factors, the price of energy is not likely to do as well in the next twelve months as it has in the last twelve months. We did very well indeed on the energy front in '82; I don't think we will do terribly in '83, but it is very likely that we will have a number a little bit bigger than 1982's 0.3 percent increase. On the other hand, mortgages may do better in '83. Possibly, the next twelve months might actually see a negative number if mortgage interest rates go down. This prediction is not cast in stone, but it is not at all unlikely. Further, if food prices do about the same as in 1982, then the three special factors, as a whole, should contribute about as much to inflation in '83 as they did in '82. If all this comes to pass—if all the cards fall the right way—we are even looking at a 1983 inflation rate somewhat below 5.0 percent. A very good inflation performance relative to where we were not so long ago.

Let me preface my look at interest rates by saying that interest rates are impossible to predict. And yet, despite having undercut what I am about to say, let me express a least-likely-to-go-utterly-wrong forecast for interest rates.

The drop in market-sensitive interest rates, which came faster than most economists expected, may be just about over—now many economists anticipate a rise, if only a rather weak one. But rates for home mortgages and consumer loans, which lag behind the market-sensitive rates, should still have declines ahead of them. As well, the Fed now seems to be afraid of what it has done to the economy and seems unlikely to slam on the monetary brakes again right away.

All these facts add up to lower interest rates for a while. But then, if and when the recovery gets going, demand for credit should perk up and pull interest rates up with it. On top of that propellant, immense government borrowing requirements will arise in the coming years. These factors should reverse the downtrend and start rates going up again next year.

What is abundantly clear is that only an eternal optimist could see the economy presently poised on an exuberant boom.

The Recovery

A reasonable question to ask at this point is why, other than from force of habit, are economists predicting a recovery soon. Since I have joined that forecast, albeit half-heartedly at best, let me try to list some reasons why a recovery is expected to start very soon. While I am doing so, I will mention as well what might go wrong and foul up this forecast. First of all, we have a tax cut coming in the middle of 1983, which is the first dose of real stimulus to come out of the President's program. The cut should have good old demand-side effects on consumer spending (and never mind about the supply-side economics stuff). Second, as I noted a moment ago, the Federal Reserve now seems scared about what it has done to the economy and has eased up recently and allowed interest rates to fall. My guess is that the Fed will continue to be accommodating, at least for a while, thereby helping investment spending, which, in turn, will help spending on consumer durables (very often financed by installment credit) and on housing which is now creeping up at the count of "9." In addition to its accommodative posture, the Federal Reserve announced about two months ago that it was abandoning its monetarist operating procedures, those procedures that I was specifically attacking a few minutes ago. It cited several reasons for doing so, including the maturing of the all-saver certificates and of the new bank accounts which are very similar to money-market mutual funds.

I suspect, however, that there was another, unstated reason that was probably at least as important in the Fed's decision as the two cited above. That is, there's evidence that, during the first half of 1982, the demand for money-to-hold increased, which many analysts have attributed to the pervasive economic uncertainty and to investors' desire to get into insured bank accounts rather than take risks elsewhere. No one is quite sure why it happened, but very strong evidence exists that it did happen. Now, when the Fed is pursuing a monetarist policy—targeting on the rate of growth in the supply of money—and the demand for money shifts upward, then interest rates rise. What happened during the first part of 1982, and what made this recession so much more severe than people thought it would be, is that the Fed inadvertently, I believe, tightened credit far more than it intended too. I think they learned a lesson—I hope they learned a lesson from that—which has chastened them in their monetarist crusade.

The big questions about present policy, to my mind, are two. First of all, is this shift away from money targeting temporary or permanent? The Fed has said it is temporary. I certainly hope it is permanent. The second question is: Will the Fed clamp down too hard again once the recovery gets going? These two questions pose substantial risks because the answers could go the wrong way, i.e., the Fed *could* quickly revert to monetarism, and it *could* quickly revert to very tight money, especially if the progress against inflation halts or is reversed by some factor.

Two salient facts illustrate the risks run if the answers, in fact, do go the wrong way. First, while it is true that nominal interest rates have fallen a great deal from their peaks, *real* interest rates have not fallen a great deal from their peaks and are still high by historic norms. Indeed, it is not impossible that we are actually now looking at higher long-term rates than we were a year ago. Nobody really knows, but it is not impossible. In any case, real rates are still quite high, so we shouldn't delude ourselves into thinking that the economy is now awash in credit and basking in the glow of low interest rates. It is just not true.

This Administration seems willing to gamble on the private economy's ability to right itself, and the Congress is not seizing the initiative.

Second, the commercial banking system in the United States is presently in an extremely fragile position that could easily be upset by the bankruptcy of a major U.S. firm or by the default of a foreign nation. I shudder to think what might happen if there was a failure of one of the country's major banks brought on by a default or bankruptcy. I really do shudder to think about it, so it is with fear and trembling that I await the Fed's answers.

Remember that I am still listing reasons to expect a recovery—the above was a qualification of how it could go wrong. Pro recovery is the evidence that housing, which fell so very far in this recession, is bouncing back at last. Housing starts perked up finally in the third quarter of 1982, and surveys suggest that a 12 to 13 percent mortgage rate will bring potential homeowners back into the market. We are close to that rate right now, but the danger in this part of the forecast is quite obvious. If, in fact, interest rates do not go down much farther and never reach this golden range of 12 to 13—if that is indeed the golden range for mortgage rates—then the rebound in housing could be stalled. And housing sales and starts are two of the engines that we are hoping will drive us out of this recession.

Another factor is inventories. A turnaround in inventory investment, that is, a switch from inventory decumulation to inventory accumulation, has been a feature of every post-War recovery. If something like a normal rate of inventory accumulation should resume right now, that would give the economy a tremendous and much needed boost, so that is part of the hope or the belief of people looking for recovery. Not too exuberant a stocking of inventories but just to a normal level as the aftermath to the rather large destocking that went on in 1982. Inventory accumulation seems likely but, again, the qualifier is that it is by no means a sure thing and certainly by no means a sure thing if sales continue to be as weak as they have been. I'd say that if this proves to be a weak Christmas season in the stores, then panic on New Year's Eve would be an appropriate way to usher in the next 365 days.

The next factor on my list is wage moderation. One result of what economist James Tobin has called "income policy by terrorism" or what Karl Marx, 140 years earlier, called "the reserve army of the unemployed" has been a substantial moderation in wage settlements. Over the past 12 months, average hourly earnings have increased 6.0 percent, and that is to be compared with the 10 percent rate in 1980—a long way down. Lower wages should, in principle, encourage more hiring and encourage firms to reduce their selling prices, thereby spurring sales. I think that many economists exaggerate the importance of this avenue of recovery, but it is present.

Next, we have the military build-up. Whatever else you may think of President Reagan's planned military build-up, it does represent spending, and it does represent an increase in aggregate demand. We have not really seen the effective increase, yet, but it is coming, starting a little bit in fiscal year '83 then getting bigger and bigger as we look outward.

Finally, if you are really an optimist—I think you can tell that I am not, but if you are—then maybe you can see the dim beginning of an old-fashioned anti-recessionary policy emerging on Capitol Hill right now. I am not nearly enough of an optimist to see that, but some people are. The proposal to raise gasoline taxes in order to spend more on housing, for example, is certainly *not* an example of that kind of policy. All it does is give with one hand and take away with the other. Now, that increase in taxes may be a good or bad idea; however, it is not a policy that is going to give the economy any kind of a push out of this recession. I do not really see, therefore, any meaningful anti-recessionary policy coming out of Washington. Instead, this Administration seems willing to gamble on the private economy's ability to right itself, and the Congress is not seizing the initiative.

On the Potomac, then, the economics of Herbert Hoover are back. Many of you remember, I presume, that Hoover also asked us "to stay the course." That request got both the Republican party and the United States economy in trouble for some time to follow.

In this context, I am reminded of, and I would like to close with, a remark made by an economist at a meeting of the Academic Advisors to the Federal Reserve Board that I attended a year ago. Whereas the Fed members were extolling the virtues of a steady policy, the economist offered how it didn't inspire confidence in him to see policymakers following a steady policy straight into oblivion.

The majority of economic analysts knew that the Reagan forecast was either far too optimistic on how fast inflation was going to fall—if the economy was going to grow as predicted, then rising, not falling, inflation would be the result—or that it was far too optimistic on real growth—if the economy was going to enjoy the predicted decline in inflation, then it would not enjoy the predicted high levels of growth.

Kansas Revenue Estimating

Prior to 1982, the original estimates showed a uniform bias: in each of the six years, revenues were underestimated.

Darwin W. Daicoff

Dr. Darwin Daicoff is a Professor of Economics at the University of Kansas and has served on numerous taxation and economic development committees by appointment of the Governor and legislature. Dr. Daicoff was Chief Economist and Director of the Kansas Office of Economic Analysis and Director of the KU Institute for Economic and Business Research. He has been a member of the Consensus Revenue Estimating Group since its formation.

Introduction

Even the most casual observer of the Kansas political/economic scene should be well aware of the difficulties the State has faced as a result of recent revenue shortfalls. Many other states are beset with similar financial difficulties, but little comfort can be taken from the fact that Kansas' situation is not unique. In order to better understand the present situation, this article is addressed to revenue estimating. It details the process of revenue estimating in Kansas and also analyzes the record of previous forecasts.

More specifically, this article shows how the State annually faces this first step in budgeting and explains the role of the Consensus Revenue Estimating Group (CREG) in the process of fiscal planning. Because Kansas cannot budget a deficit, revenue estimates limit the noncapital expenditure proposals of the Governor and enactments by the Legislature. That is, budgeting in Kansas is restrictive in that planned expenditures cannot exceed beginning balances plus anticipated revenues; thus, the essential role of revenue estimates.

It should be noted that CREG does not have legal standing; however, as it has evolved over the years, the group is now a somewhat formal element in State policy formulation.

The Consensus Revenue Estimating Group

CREG consists of consulting economists from The University of Kansas, Kansas State University, and Wichita State University as well as representatives from the Division of the Budget, the Department of Revenue, and the Legislative Research Department. In addition, representatives of the Department of Human Resources and the U.S. Department of Agriculture provide information on employment and farm trends. There are, then, six elements to the group. Because some of the organizations are represented by more than one person, the typical CREG meeting involves between 12 and 15 individuals. While there have been some changes in the group over the years, the group has remained rather stable during its nine years of operation. Before the formation of CREG, a similar but less formal organization was in existence.

The diversity of training, experience, and orientation of CREG members naturally results in differences within the group in terms of forecasting approaches and methods. Econometric, statistical, trend, and judgmental forecasting methods variously influence the estimates of the individual forecasters. No matter how the six individual estimates are developed, however, the procedure of the group is to develop a consensus estimate which represents the best possible forecast.

In the following sections, CREG procedures for economic forecasting and revenue estimation are described. The discussion also directs attention to alternative income concepts, adjusting receipts, elasticity, modifications, and timing.

Developing an Economic Forecast

Development of a Kansas economic forecast first requires a national forecast, a large number of which are available from private consulting firms, financial institutions, federal and state government organizations, and universities. Kansas subscribes to Data Resources, Incorporated forecasting services. In addition, various members of CREG have access to additional services. These are shared among the group and provide the input for the national economic forecast prepared by CREG.

At this stage of the process, particular attention is paid to forecasters who have superior records of accuracy in their projections and to those who provide detailed estimates for those economic variables particularly significant to the Kansas economy. Since quarterly national forecasts are available, CREG's national forecast includes both a yearly and a quarterly dimension.

Armed with a national economic forecast, the next step in revenue estimation involves reducing national estimates to the State level for development of a Kansas economic forecast. This step entails quantifying and postulating the historical relationship between the nation's and the State's economic performances, resulting in a projection of the State's economy from the national forecast.

State forecasting also involves examination of those trends of particular economic importance to Kansas. By focusing on Kansas-specific patterns, a somewhat different picture is often drawn from the scaled-down national picture. In this respect, special concern is directed to Kansas employment and unemployment; agricultural prices, output, and income; the general price level; total personal income; and components of personal income for the forecast period.

The final step in Kansas economic forecasting combines the two pictures into one view of the Kansas future. A summary of the national and Kansas forecasts are published annually in the Governor's economic and budget reports and are also summarized in the CREG report of revenue estimates provided to the Legislative Budget Committee and the Governor.

Revenue Estimation

Several factors are considered in producing revenue estimates, including personal income, adjusted historical revenue receipts, and elasticity. Kansas **personal income** estimates are available from the U.S. Department of Commerce by quarter, year, and income type. These measures of total income are appropriate for the objectives of the Commerce Department but are not a good tool for estimating Kansas tax revenues. The fact is that, both conceptually and empirically, personal income is a rather poor predictor of individual income tax collections and of most sales and excise taxes. In order to predict these revenues more accurately, two different income measures have been developed: income flow and money flow. Income flow measures a flow of dollars that, depending on a taxpayer's

The reason for the significant underestimation was an assumption that economic conditions, both nationally and in Kansas, would improve and that the recession would end shortly.

particular situation, could lead to an income tax obligation. Money flow measures spendable income before taxes and social security payments and, therefore, should be more closely related to purchases and purchase-associated tax collections.

The first step in the development of each of these flows is the elimination of the imputed incomes portion of personal income. These imputations are a component of total income; however, they do not reflect income that is either taxable or spendable. The clearest example of this imputed incomes portion is the estimated value of the housing services provided by owner-occupied dwellings. This amount is part of total income but is not taxable under the income tax, nor is it spendable on items subject to the retail sales tax.

In the second step, certain nonwage and transfer incomes (such as employer-provided fringe benefits and transfer payments) are removed from personal income to calculate income flow. While these are part of income, they are not subject to the income tax. To the extent that these monies are passed on to Kansans, these incomes are retained under the money flow measure. For example, compensation for injuries, welfare payments, or unemployment payments are included in money flow but not in income flow.

Finally, social security taxes are subtracted from money flow (the individual does not receive this amount, nor can he spend it), but are retained when estimating income flow (the associated income is taxable under the individual income tax). Both income flow and money flow measure are used in the revenue estimating process.

Although accurate **historical tax receipts** data are available, they are flawed for the purpose of revenue estimation. Over the years, numerous changes have taken place in the Kansas tax structure: exemptions have been added for some taxes, eliminated for others; many tax rates have been changed; and the percentage of some collections flowing into the general fund have changed for some taxes. Thus, any attempt to employ nonadjusted historical data to make future estimates is almost guaranteed to fail. For better estimates, the tax data must be "cleaned up"; hence, the need for adjusted tax receipts.

Three steps are taken when calculating a multi-year series of adjusted collections: 1) tabulation of the actual collections from each of the revenue sources of concern; 2) adjustment of these collections for any changes in tax laws or administrative procedures which have occurred; and 3) determination of the contribution of each tax to the general fund. In addition, the process of adjustment requires that one year be chosen as the standard for all three steps. This requirement is satisfied by making current State tax laws, administrative procedures, and the allocated portion for each tax the standard. Each previous year's collections are then recalculated to the current year standard.

In recent years, three types of legal and administrative changes have occurred which necessitate adjustment: 1) changes in tax rates, such as the altering of tax brackets for the individual income tax; 2) changes in the tax base, such as the exemption of some farm implements and residential utilities from the retail sales tax; and 3) changes in administrative procedures, such as increased enforcement efforts by the Audit Services Bureau of the Revenue Department. In addition, some taxes, such as the bingo and tobacco products taxes, have only existed for a relatively short time; still, estimates are required of what these tax receipts would have been had the taxes existed.

Further, changes have been made in the percentage of some taxes allocated to the general fund. For example, a portion of the motor and special fuels collections at one time was allocated to the general fund—this is no longer the case. Also, that portion of the cigarette tax allocated to the general fund was increased some years ago. The adjustment process eliminates any consequence of changes of this sort.

Having eliminated the revenue consequences of changing tax laws, administrative procedures, and allocation, a cleaned or adjusted revenue series is produced, and economic analysis can begin. Economists have traditionally employed the concept of **elasticity** to account for the relationship between prices, output, and receipts or expenditures. Elasticity measures the percentage change in one variable, e.g., sales tax collections, due to a percentage change in another variable, e.g., personal income. As collections from a number of taxes (most notably the individual income tax) are dependent on income, the applicability of the elasticity measure is apparent.

The income elasticity of each revenue source can be calculated, thereby measuring the responsiveness of collections to income changes. The elasticity value is calculated by dividing the percentage change of tax collections over a given time period by the percentage change of income over the same time period. Thus, given that sales tax collections

Table 1
Income Elasticity of Kansas Adjusted Taxes, 1973-1982

Tax Source	Income Elasticity
Property Tax	
Motor Carrier	1.20
Income and Privilege Taxes	
Individual	2.38
Corporate	1.29
Financial Institutions	0.78
Domestic Insurance Companies	0.19
Inheritance Tax	1.43
Sales, Use, and Excise Taxes	
Retail Sales	0.98
Consumers' Use	1.47
Retailers' Use	0.99
Cigarette	0.13
Tobacco Products	0.60
Cereal Malt Beverage	0.20
Liquor Gallonage	0.27
Liquor Enforcement	0.90
Corporation Franchise	1.25
Wheat	0.53
Gross Receipts Taxes	
Insurance Premiums, Foreign	0.90
Insurance Premiums, Domestic	1.22
Insurance Premiums, Fire Marshal	1.04
Private Car Companies	0.93
Music-Dramatic Companies	1.99
Bingo	0.26
Total	1.26

rose by 148 percent from 1973 to 1982 and that personal income over that same period rose by 151 percent, the calculated income elasticity of the sales tax is 0.98. (Elasticity also can be calculated on the basis of income flow and money flow described above.) Recently calculated personal income elasticities for the adjusted collections of Kansas general fund taxes are shown in Table 1.

It should be clear that any tax with an elasticity greater than one has experienced a greater than proportional growth in collections relative to income. For example, the income elasticity of the individual income tax is 2.38, implying a 23.8 percent rise in tax collections if income grew 10 percent. For the period 1973 to 1982, total Kansas general fund tax collections, adjusted to current statutes and administrative procedures, exhibit an income elasticity of 1.26. Thus, a 10 percent increase in Kansas personal income has produced a 12.6 percent increase in general fund tax receipts. If this relationship persists and if statutes and procedures are not changed, personal income increases in Kansas will generate growth in tax receipts for the general fund slightly in excess of the income growth rate.

During the last third of FY 82, general fund deterioration was concentrated in corporation and individual income taxes.

In producing revenue forecasts, CREG actually develops a consensus. Each forecaster comes to the conferences with his/her estimates. The conference involves developing an agreed-upon estimate for each revenue source. No votes are taken: each forecaster supports his/her forecasts and has an equal opportunity to influence the group. However, an individual with superior or more detailed knowledge about a particular source exercises more than proportional influence on the final estimate for that source. The give-and-take of discussion produces an agreement—an estimate that each member of CREG can "live with."

Revisions of the Estimates

When revisions to estimates are considered for fiscal years that are underway, collections-to-date are important data. For example, if collections from the sales tax were running significantly behind what was forecasted, sales tax receipts for the current year would likely be reduced, and a revision would be made—unless there were good reasons to expect a greater than anticipated increase in collections.

It should be noted that adjustments are also made for tax changes within the fiscal year. For example, if withholding rates under the individual income tax were changed by the Department of Revenue on Janaury 1, the timing of collections and the total collections for the year probably would be modified. Because major Kansas taxes depend on federal taxes, attention also is directed to changes in federal tax statutes and procedures, particularly for individual and corporate income taxes. CREG members adjust their estimates for those federal changes which have been enacted but which may not as yet be fully operative; however, proposed federal tax law changes are disregarded—the group does not try to anticipate the federal legislative process. In a similar fashion, proposed State tax statutes are also disregarded, and revenues are estimated based only on existing State statutes.

The FY 82 Record

The original estimates for FY 82 general fund receipts were made in November 1980. From a FY 81 increase of 11.7 percent (total of $1,226.5 million), receipts were anticipated to grow to $1,352.6 million. Subsequent legislative actions led CREG to lower this estimate slightly to $1,352.2 million. CREG clearly anticipated a sluggish economy by projecting a 10.3 percent growth in FY 82 receipts. Nonetheless, major growth was anticipated in principal receipt sources—a growth of 13.8 percent for the individual income tax, 12.5 percent for the compensating use taxes, and 10.6 percent for the retail sales tax.

In November 1981, further reductions were made in FY 82 estimates. The total reduction was $17.8 million; the general fund growth rate was reduced from 10.3 percent to 8.8 percent from FY 81 receipts. Major decreases were made in the estimates of retail sales tax ($18.3 million), corporation income tax ($9.9 million), and compensating use taxes ($6.0 million), while major increases were made in the individual income tax ($6.3 million) and the inheritance tax ($3.0 million) estimates. Among the reasons offered for these revisions were: 1) a shortfall in actual revenue collections through October relative to what had been estimated; 2) a reduction in anticipated Kansas personal income, prices, and employment increases; 3) an increase in the projected Kansas unemployment rate; and 4) a delayed national economic recovery.

An additional reduction of $13.5 million was made in April 1982. The reduction was concentrated in the individual income and retail sales taxes for which each tax was reduced by $7.0 million. Again, the record of collections and the sluggish economy were offered as the main reasons for the reduction.

Actual Receipts

In spite of these reductions, actual FY 82 receipts were still below the second revised estimates. The total collections were $1,273.0 million, a growth of only 3.8 percent from FY 1981. Receipts were $78.3 million (5.8 percent) below the original estimate and $47.0 million (3.6 percent) below the second revised estimate. The major negative differences were recorded for the retail sales tax ($30.4 million), corporation income tax ($28.2 million), individual income tax ($20.1 million), and compensating use taxes ($8.9 million). Positive differences were much smaller—the inheritance tax ($4.6 million) and the interest income ($11.1 million).

It should be clear that the directions of the revisions, in total and for most individual taxes, were generally correct; however, their magnitude was too small. The reason for the significant underestimation was an assumption that economic conditions, both nationally and in Kansas, would improve and that the recession would end shortly. As time passed, the date of the recovery continued to be pushed forward, its anticipated strength reduced. The national economy continued to deteriorate, and Kansas was influenced to a greater extent than in other recent national recessions.

Timing of the Shortfall

Through March of FY 82, receipts were below the estimates applied to each month. A very large portion of the 1982 revenue shortfall occurred in the next four months of the fiscal year, $47.0 million from the April 1982 revision. It should be noted that actual receipts for three of the four months and for the total four months were less than receipts for the same periods a year earlier. This pattern continued into the first four months of FY 83: for two of the four months and the total four-month period, receipts declined from the same periods a year earlier.

During the last third of FY 82, general fund deterioration was concentrated in corporation and individual income taxes. While total retail sales tax collections at the end of FY 82 and the beginning of FY 83 were not particularly weak, individual collections from manufacturing and trading, automobile, and construction-related retailers were quite flaccid.

Furthermore, total employment in Kansas during the second quarter of 1982 was only a little larger than it had been in the spring of 1979. From the beginning of 1979 through mid-1982, negative growth had been recorded in all but four quarters. And yet, Kansas personal income, buoyed up by inflation, had grown in each quarter since the recession of early 1980. However, within this period, growth slowed from the end of 1981 through the beginning of 1982. The decline accelerated during the second quarter of 1982. These trends support the position that the revenue problems of FY 82 and early FY 83 resulted from adverse economic conditions.

Anticipation and Action

To a considerable extent, the FY 82 revenue shortfall had been anticipated: the fact that the estimates were reduced in November 1981 and in early April 1982 was well-publicized. Governor Carlin "sounded an alarm" in mid-April during the recess before legislators closed the 1982 session. The Governor continued his call for a severance tax on oil and natural gas production to provide a new source of revenue, a source not directed toward offsetting the collective shortage but to fund additional State expenditures. Nonetheless, legislative conflicts prevented this or any other source of additional revenue. As described above, a significant portion of the revenue shortfall occurred in the last few months of the year—*after* the legislative session had ended.

When the extent of the final shortfall ($47 million) from the second revision became known, the State's executive branch was forced to act. The immediate action was to freeze merit salary increases for State civil service employees and to force four percent expenditure reductions on certain State agencies. Further reductions from the levels underlying the expenditure decisions of the 1982 legislature have been proffered to deal with revenue shortages now anticipated in FY 83 receipts.

Carryover to FY 83

Revisions to the original FY 82 estimates and the subsequent revenue shortfall have carried over to the FY 83 estimates. In November 1981, FY 83 revenues were originally estimated at $1,487.6 million; by April 1982, the estimates were reduced slightly to $1,451.6 million; and in November 1982, they were reduced even further to $1,301.3 million. The anticipated growth rates from FY 82 receipts, implied by these figures, were 11.5, 9.9, and 2.2 percent, respectively. It should be noted that the first two of these values are a comparison of estimated FY 82 receipts to estimated FY 83 receipts; the third value compares actual FY 82 receipts to estimated FY 83 receipts. Again, the delay in the recovery from the national recession and the generally deteriorating Kansas economy were the main reasons offered for these reductions in revenues. In addition, there was a slight increase in the negative impact on Kansas receipts resulting from the Federal Economic Recovery Act of 1981 and the Tax Equity Fiscal Responsibility Act of 1982.

Timing of the Estimates

Official revenue estimates are made three times a year by CREG. Each May, however, CREG makes preliminary estimates for the fiscal year which will begin fourteen months later (on July 1). These calculations form the basis of the Division of the Budget's instructions to State agencies regarding their funding requests for that fiscal year. This session does not involve adjusting existing estimates for the current or subsequent fiscal years: its sole purpose is to provide guidance to the Division of the Budget.

The first revenue-estimating conference occurs in mid-November. In late October, prior to the November conference, CREG meets to discuss economic conditions and to formulate a set of economic parameters to guide each of the estimators in developing his/her revenue forecasts. At the November meeting, necessary revisions of the current fiscal year's estimates are made and the first publicized estimates are prepared for the next fiscal year.

Late in each legislative session, late March or early April, the group meets again to effect necessary revisions, if required, to the November estimates. The purpose of this second conference is to take advantage of five months additional data on revenue collections and economic conditions.

One final revision of the forecasts is made in May, just after the end of the legislative session. When legislation is considered, a fiscal note is prepared by the Division of the Budget, which quantifies the revenue impact of the proposed legislation. These figures typically are developed in consultation with the Legislative Research Department and affected administrative agencies. The estimates provide data needed to revise the CREG revenue estimates as required by the year's legislation.

Allocation of the Estimates

Allocations of the fiscal year estimates are divided among the months by the Division of the Budget. Controlling this activity is the historical relationship between monthly and yearly receipts. This control automatically takes statutory and administrative payment requirements into account, such as April 15 for the individual income tax. Further adjustment is made for deposit days at month's end because both administrative procedures and the inabiltiy to deposit funds over weekends influence monthly collections. Finally, the proration method automatically takes any seasonality of receipts into account, such as retail sales tax collections from extraordinarily large sales in December or rising auto sales in the spring.

Changing economic conditions within a given year should influence the yearly pattern of collections for that year. However, as fiscal planning in Kansas has been concerned with the ability of the State to finance its yearly expenditures, only limited concern has been given to the monthly pattern of receipts and expenditures. In the past, the State's balances have been able to handle any monthly mismatch between resources and needs, but the current and prospective low balances may require that more attention be given to the allocative spreads in the future.

Revenue Estimation in Other States

There are both a number of similarities and differences between revenue estimation in Kansas and in other states. For example, only one set of estimates are made in Kansas to be used by both the legislative and executive branches of government, whereas in other states, even though the Governor or a designated organization may have the legal responsibility for preparing the official estimates, other estimates may also be developed. In some states, the treasurer and/or comptroller may make their own estimates. Legislative estimates also may be made—in some states by both senate and house tax or finance committees. On a number of occasions, the existence of multiple estimates has caused considerable planning difficulties for these states.

CREG's procedures and methods are not uncommon among estimating entities in other states, but differences also exist. In some states, a formal econometric model is the singular or primary estimating tool. Private national economic consulting firms often have developed these state revenue forecast models. In other instances, the models originate from within the state, often with major inputs from state universities. While these models are considerably more elegant than the CREG method, the formal models do not always have a superior record of accuracy.

As economic development proceeds in Kansas . . . . national economic fluctuations will register more directly in the State, and, in turn, the historical stability of the Kansas economy will be lost.

Problems in Revenue Estimating

So long as the national and state economies are experiencing regular growth and no major tax changes are made, most states are able to forecast revenue fairly accurately. When a major change occurs in the rate of national economic growth, however, serious problems are created for state forecasting. There are two aspects of these problems: determining how the state economy will respond to the national changes *and* predicting how soon the national and, consequently, the state economies will return to their previous growth. These aspects have plagued state revenue estimation for the past few years. The prolonged national recession has forced many states (e.g., California, New York, and New Jersey) to reduce estimates by 10 percent and a few (e.g., Michigan) by more than 20 percent.

When major tax changes are made—particularly when new taxes are adopted—other difficulties arise. If only limited experience can be drawn upon from other states, the absence of historical precedents can cause major problems. For example, the revenue consequence of adopting indexing under the individual income tax has been very difficult to predict in Minnesota.

CREG's Performance Record

Having examined the method and procedure of Kansas general fund revenue estimation, it is appropriate to examine the record of accomplishment of CREG. The dates of the original and revised estimates for each year are identified in Table 2, and data are presented which compare the original CREG estimates to revised estimates and actual receipts. These data, which include adjustments to the estimates so as not to distort the comparisons between estimates and actual receipts, provide a basis on which to judge the estimates' accuracy.

For the seven fiscal years, the original estimates—made some seven months before the start of each fiscal year—are consistently farther from actual receipts than the revised estimates—which were made four months into the year. Prior to 1982, the original estimates showed a uniform bias: in each of the six years, revenues were underestimated. This bias was eliminated by the revisions. The 1982 estimates, however, were greater than actual receipts.

It should be noted that this comparison of estimates to receipts is in terms of total, not individual, revenue sources. Even in those years for which estimated total receipts proved to be quite accurate, considerably larger percentage "errors" were registered for some individual sources. Characteristically, one tax was overestimated while another was underestimated. Thus, the total revenue estimate benefited from compensating errors and, consequently, was quite close to actual receipts.

Table 2
CREG Record

Fiscal Year	Estimates Original	Estimates Revised	Actual Receipts	Differences Original to Actual	Differences Revised to Actual
	(millions of dollars)			(percent)	
1976	$ 676.3	$ 699.7	$ 701.2	3.7%	0.2%
1977	757.3	760.7	776.5	2.5	2.1
1978	830.1	861.2	854.6	3.0	−0.8
1979	945.2	1,019.3	1,006.8	6.5	−1.2
1980	1,080.3	1,095.9	1,097.8	1.6	0.2
1981	1,197.1	1,226.5	1,226.5	2.5	0.01
1982	1,351.3	1,320.0	1,273.0	−5.8	−3.6

Conclusion

This article has described the role of the Consensus Revenue Estimating Group (CREG) in Kansas revenue estimations. By comparing CREG's revenue estimates to actual collections, the accuracy of the group's forecasts also has been examined. Prior to FY 82, the group had an impressive record. The depth and duration of the current national economic recession, however, has caused estimating problems in Kansas as well as in other states.

As the national economy recovers, Kansas revenues should recover, and the ability of CREG to forecast collections should improve. Two aspects of revenue estimating, however, will make future estimating more difficult and likely result in less accurate forecasts than were made prior to FY 82. First, as economic development proceeds in Kansas, it is likely that the basic structure of the Kansas economy will come to reflect the national economy more directly, i.e., it will become less agriculturally-related and will correspond more closely to the national industrial mix. As a consequence, national economic fluctuations will register more directly in the State, and, in turn, the historical stability of the Kansas economy will be lost.

Second, the relative contribution to the State general fund of various individual revenue sources has changed significantly over recent years. The tax structure has shifted away from sales and excise taxes and towards income and privilege taxes. As shown in Table 1, this change is equivalent to a shift to more volatile revenue sources which means that a change in Kansas personal income will carry with it a larger relative change in State general fund receipts. As a consequence of these two factors, revenue estimating will be more difficult in the future.

Research Note

Recent Federal Policy: Its Impact on the Work-or-Welfare Choice in Kansas

As have all administrations since the Great Depression, the Reagan Administration advocates getting the poor working and off the welfare rolls. And yet, upon close examination, evidence suggests that recent changes to major welfare programs engineered by the Administration discourage work and encourage public assistance—ultimately resulting in higher program costs. This research note focuses on the working poor and on the impact on the financial incentives for the poor to work of recent legislative changes in two key welfare programs: Aid to Families with Dependent Children (AFDC) and Food Stamps. (It is important to note that a family may be below the poverty level even though they work and/or receive welfare benefits.) More specifically, data for Kansas are presented which indicate that, for the lowest AFDC wage earners, the financial incentives to work have eroded during the past two years to the point where, ostensibly, few remain. Consequently, low income families may reduce their work effort in order to continue on, or return to, welfare, thereby driving program costs higher.

Generally referred to as "welfare," AFDC is designed to pay subsistence level income to poor families. Normally, AFDC recipients' income is also supplemented by the Food Stamp program, from which allocations are based on an estimate of the minimum amount of money necessary to achieve adequate nutrition. Other programs which AFDC and Food Stamp recipients may be eligible for include Medicaid, energy assistance, Social Security Insurance (SSI), housing subsidies, and school lunches. These programs are not designed to bring the poor out of poverty but, rather, to provide income for the basic necessities.

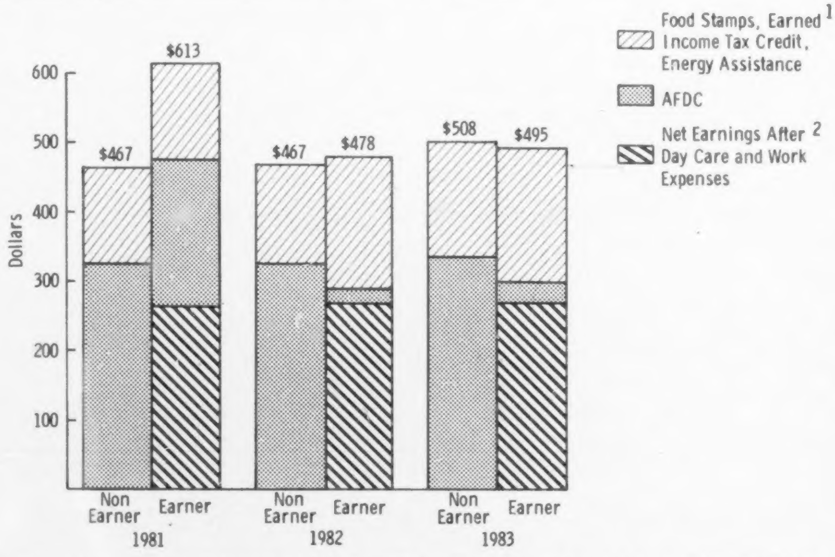
The 1981 Omnibus Budget Reconciliation Act legislated several changes in the AFDC and Food Stamp programs. The change having the most effect on low income working families dealt with the amount of the earnings disregarded in calculating AFDC recipients' benefit levels. Prior to this change, an established level of earnings was ignored in calculating income for AFDC benefits. These ignored earnings are referred to as the "earnings disregard." After the 1981 legislation, the disregard was only applied to the first four months of continuous employment; after that time, all earned income is included in benefit calculations. The direct outcome of the disregard and other programmatic changes was to offset earnings with decreased benefit levels. These efforts are described in detail below.

Tom Joe, economic analyst for the Center for the Study of Social Policy, in a paper entitled "Profiles of Families in Poverty: Effects of FY 1983 Budget Proposals on the Poor" examined the difference between disposable incomes of AFDC recipients for FY 1981, FY 1982, and for the FY 1983 budget proposals for all of the U.S.[1] Figure 1 presents the data for Kansas. The FY 1983 data have been updated from Joe's report with actual, rather than proposed, amounts. The data show that a Kansas AFDC-eligible mother of two, working at $389 a month, could substantially raise her income in 1981 and raise it slightly in 1982; however, in 1983, her income from working would actually be lower than what she could receive only from public assistance. In this specific case, obviously the financial incentives are to go or remain on public assistance.

The previous example is specific to the assumption of average earnings and costs associated with working. The method employed to ascertain the financial incentives to work at various income levels is the "marginal benefit reduction rate" which measures the rate at which benefits are reduced as earned income increases.[2] Consequently, if a recipient loses $75 in benefits for every $100 in earned income, the marginal benefit reduction rate is 75 percent. In this case, the

Figure 1

Total Disposable Income for Kansas Working and Non-Working AFDC Mothers with Two Children



1 Earned Income Tax Credit is a refundable tax credit of 10% or $500, whichever is less, of a family's total earned income up to $6,000.
Energy Assistance Payment is the average payment to all eligible households in each state for 1980.

2 Net Earnings equals gross income less child care and work related expenses. The figures used were based on the average for Kansas as reported in the 1979 AFDC Recipient Characteristics Survey. Gross income was updated 15.53% to reflect the rise in minimum wage from 1979 to 1981. The actual figures used were: Gross Income - $389, Work Expenses - $75, and Child Care - $50.

Source: Tom Joe, "Profiles of Families in Poverty: Effects of the 1983 Budget Proposals on the Poor." A Working Paper, The Center for the Study of Social Policy, February 25, 1982.

recipient's disposable income increases $25.

In Table 1, the marginal tax rates for a welfare mother of two in Kansas are presented for FY 1981 and FY 1982. The most remarkable result demonstrated in the table is the change in the distribution of marginal tax rates for AFDC wage earners at various income levels. In the earnings bracket of $0-$400, the marginal tax rates rose from an average of 66 percent in 1981 to 97 percent in 1982.[3] Consequently, in 1982, the financial incentives for recipients to work at these levels are negligible, given their disposable income only increases $.03 on every dollar earned. However, recipients earning above $400 experience a much higher marginal benefit reduction rate in 1981 than in 1982. Thus, if the recipient could earn above $400, she would be much more likely to work based on the financial incentives in 1982 than she was in 1981. Given this information a "rational" recipient, in the economic sense, would turn down a job for $350 a month but would be apt to accept one at $425 a month.

Table 1
Marginal Benefit Reduction Rates for Kansas AFDC Mothers with Two Children

Gross Earnings	Marginal Benefit Reduction Rate FY 1981	 FY 1982
$ 0	0%	0%
$ 25	42	97
$ 50	42	97
$ 75	59	97
$100	66	97
$125	66	97
$150	66	97
$175	66	97
$200	66	97
$225	66	97
$250	66	97
$275	66	97
$300	66	97
$325	66	97
$350	66	97
$375	66	97
$400	66	103
$425	70	86
$450	76	53
$475	77	54
$500	80	57
$525-$700	93	69

Source: Tom Joe, "Profiles of Families in Poverty: Effects of the FY 1983 Budget Proposals on the Poor." A Working Paper, The Center for the Study of Social Policy, February 25, 1982.

The proliferation of marginal benefit reduction rates and the changes in them, over time, are confusing to recipients. The decision of whether to offer their labor to the market or not is most likely based on their own experience and the experiences of those around them. For, if earners learn that their $350-a-month job in 1981 is effectively doing away with AFDC and Food Stamp benefits, then, in 1982, they are likely to assume that a $500-a-month job will lead to the same result. Thus, Table 1 shows only the financial incentives provided for recipients to work and makes no attempt to predict how much the work effort would be increased or decreased at various marginal benefit reduction rates. The Congressional Budget Office (CBO) does estimate, however, that one third of the nation's 188,000 AFDC working families eliminated from welfare will actually reduce their work effort and return to welfare because of the 1981 Omnibus Act. Further, the CBO estimates that the reduced work effort will decrease savings originally projected by the Administration from eliminating them from welfare by $350 million.[4]

In Kansas, the financial incentives for the lowest wage earning AFDC recipients to continue working have been eliminated due to the 1981 legislative changes. At the same time, those working AFDC families who earn above $450 have a greater incentive to work. The CBO projections indicate that a significant portion of those working will react to the financial disincentives by quitting their jobs and returning to welfare. Consequently, a significant portion of the savings incurred by eliminating them from welfare in the first place will be offset by their return.

Nancy Brown Johnson
Research Assistant
The Institute for Economic
and Business Research

Footnotes

[1] Tom Joe, "Profiles of Families in Poverty: Effects of the FY 1983 Budget Proposals on the Poor." A Working Paper, The Center for the Study of Social Policy, February 25, 1982.

[2] To calculate the marginal benefit reduction rate, the change in gross earnings was divided by the change in disposable income.

[3] The FY 1983 marginal benefit reduction rates are not available. However, given that the only change in key welfare programs was to raise maximum benefit levels—which has no impact on the marginal benefit reduction rates—the marginal benefit reduction rates for Kansas in FY 1983 should not be significantly different than FY 1982's.

[4] Joe, p. 22.

Economic Conditions
The National Review

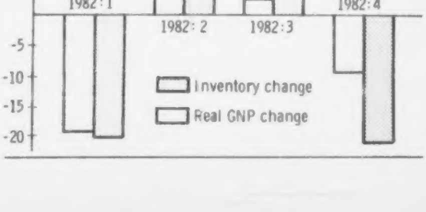
1982: A Retrospective on a Weak Economy

As 1983's first quarter moves towards its conclusion, more information is becoming available with which to assess the economy's overall 1982 performance. It makes sense, therefore, to pause for a final backwards glance at the year past before beginning an assessment of the new wave of economic optimism which has swept across the country since the beginning of 1983.

1982 started out in a recession, and, although no official declaration has been made, odds are it ended the same way. The economy's persistent weakness baffled many analysts throughout the year, and predictions of imminent recovery—made by many economists from the start of the year on—continually had to be revised and scaled back. In that aspect, although 1982 was a bad year for the national economy, it may have been a worse one for economic forecasters.

The overall decline in real GNP in 1982 was moderate by most standards: 1.2 percent from 1981:4-82:4. As detailed in Figure 1, the decline was even punctuated by mild growth during the year's middle quarters. Also included in Figure 1 are quarterly changes in nonfarm business inventories. These, as it turns out, play a significant role in unraveling the economic mystery of 1982. At the begin-

Figure 1
Real Changes in GNP and Inventories (billions of dollars at annual rates)



ning of the year, the economy stood on the precipice of another recession, having just shaken off the effects of a short but severe downturn in 1980. Real GNP had declined 5.3 percent at an annual rate in 1981:4, and business was inundated in what had become, at that point, successive waves of pessimism. Business's reaction was to stop buying and slash inventories. The result was that, even though aggregate demand actually rose slightly in 1982:1, real GNP was down sharply with the entire decline caused by the inventory sell-down.

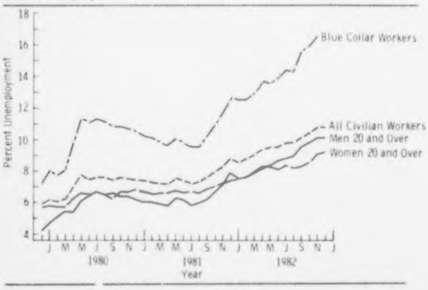
In the spring of 1982, perhaps buoyed by the spate of optimistic economic forecasts, businesses began to replenish their stocks. As Figure 1 indicates, inventory accumulated at an annual rate of 18.8 billion dollars over the second and third quarters. Aggregate demand, however, was very weak during this time, declining at an annual rate of 3.3 billion dollars during 1982:2 and 4.9 billion in 1982:3.

Because inventory buildup exceeded the retrenchment in demand, the economy registered mild output growth in each of these quarters. However, the increased scales anticipated by business had not materialized, so the stage was set, as 1982 moved into its final quarter, for another major inventory sell-down. Stocks were reduced during the quarter at an annual rate of 21.1 billion dollars. Aggregate demand rebounded, however, with personal consumption expenditures and residential investment both up sharply. And yet, they were not enough to offset the decline in inventories, and, as a result, real GNP fell in 1982:4 for the third time in the last five quarters.

Although by comparative standards the decline in output during the 1981-82 recession was moderate, the impact upon employment appears to have been more severe. The unemployment problem was exacerbated due to the short recession during 1980:1-80:2 which induced a sharp jump in unemployment from which the economy had not recovered at the time the 1981-82 recession set in.

A clearer indication of recent trends in unemployment is provided in Figure 2 on which the recent recessions are demarcated by shading. Unemployment in the civilian labor force stood in December 1979 at 5.8 percent, a rate around which it had remained for most of that year. However, over the next five months, the rate rose 1.6 percentage points, corresponding to an increase of 1.86 million unemployed.

Figure 2
U.S. Unemployment in the '80s



Although after 1980:2, the economy moved into a period of mild recovery, unemployment remained high. It had fallen to only 7.2 percent in July 1981 when the most recent recession set in. Over the next 17 months (August 1981-December 1982), the unemployment rate rose 2.6 percentage points to 10.8 percent. Over this same period, total employment fell by 1.8 million while unemployment rose 4.2 million. For comparative purposes, unemployment rose 4.2 percentage points (from 4.8 percent to 9.0 percent) peak-to-trough during the 1973-75 recession. So, when viewed from the perspective of the incremental change in unemployment rather than the level of unemployment, the deleterious impact of our latest downturn seems less severe.

This reasoning, though, is apt to provide little consolation to those idled by the recession. As depicted in Figure 2, the impact was greatest upon blue-collar workers for whom unemployment has increased 7.0 percentage points to 18.5 percent since the mid-1981 economic peak.

Outlook

Fortunately, it was possible to find considerable solace in the news detailing the economy's poor fourth quarter performance. The pick-up in consumer spending and residential construction due to declining interest rates was encouraging, as was the inventory sell-down because it implied a leaner and hungrier business sector which, once rid of excess supplies, would respond to strengthening demand by stepping up production and setting the recovery in motion.

A sampling from the latest releases of economic data tends to suggest further the budding optimism that a recovery is finally under way:

- The Composite Index of Leading Indicators rose 1.5 percent in December, its eighth increase over the past nine months.
- The value of construction contracts awarded in December stood at 13.98 billion dollars, the highest monthly rate in three years.
- Factory orders were up 4.8 percent in December, the largest monthly gain in two and one-half years. Particularly strong were durable goods orders (up 11.5 percent), which is significant because durables generally lead an economic recovery.
- Auto production in January was up 40 percent from a year ago. Sales were up 12.5 percent, but the annual rate of sales at 5.9 million remains low.
- Unemployment dropped in January to 10.4 percent, the first monthly drop since the recession began in July 1981.
- The monthly Survey of Purchasing Managers, considered one of the best barometers of future economic trends, revealed substantial strengthening in the economy in January.

If affirmed, as most analysts have, that the recession has ended, then the concern turns towards the vigor of the ensuing recovery. Considerable optimism had been expressed in this regard as well. Although the official Council of Economic Advisors' forecast calls for beginning-to-end growth in real GNP of 3.1 percent, Chairman Martin Feldstein has publicly suggested it may be as high as 5.0 percent. Other, more recent forecasts have been falling consistently in the 4.0-5.0 percent range.

Those economists among the more sanguine base their reasoning on the substantial excess productive capacity in the economy and the backlog of consumer and business needs which have been placed on a back burner during the recession. These forecasters feel that these factors represent the ingredients for a robust, noninflationary recovery and that the future trend in interest rates is stable or declining. Their reasoning centers on weak private sector demand for capital, less state and local government borrowing, and strong savings combining to offset the impact of federal financing of 200 billion dollar deficits in each of the current and upcoming fiscal years.

However, as Professor Alan Blinder warns in this issue of *Kansas Business Review*, a number of downside factors exist which could combine to once again frustrate the robust recovery scenario. Credit markets may be unable to accommodate federal government financing without engendering an increase in interest rates. Also, as leading monetarists are warning, the present growth rate of money (8.0-9.0 percent over 1982) may be too high and may result in renewed inflation and higher interest rates. Finally, the state of the world economy is weak, so also is the level of consumer confidence, which together imply that demand may not be strong enough to propel the economy into a sustained, strong recovery.

Although the strength and longevity of the recovery are not certain, two conclusions can be drawn confidently: 1) A period of growth is underway which should be relatively inflation free during its early stages, and 2) the economy has a lot of recovering to do to make up for the three years of stagnation which have characterized—and debilitated—the national economy in the 1980s.

Richard Sexton
Research Economist
The Institute for Economic
and Business Research

The Kansas Economy

1982: A Retrospective on a Weakened Economy

A review of some of the key economic indicators for Kansas shows that, although the recession has not affected Kansas as severely as the nation, the state has not escaped unscathed. Indeed, Kansas' historical immunity from the more severe effects of declines in the national business cycle may be a condition of the past.

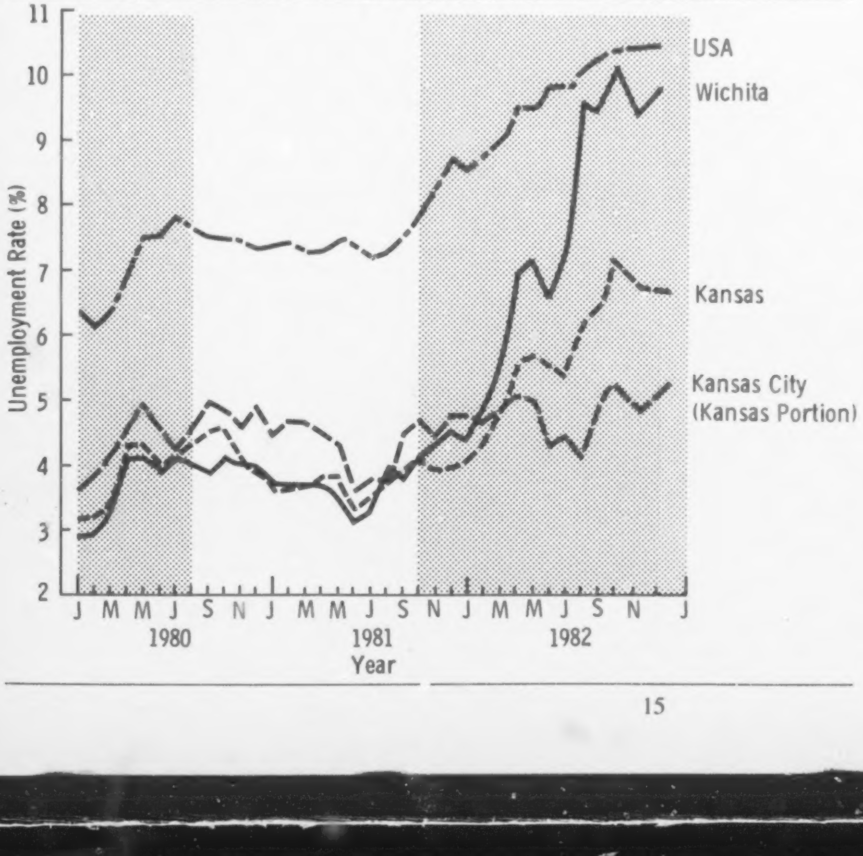
As in the nation, unemployment in Kansas continued to climb throughout 1982. As well, both the nation's and Kansas City's inflation rates—though trending downward significantly during the past year—still cannot be said to have fully stabilized at low levels. Most recent economic indicators from 1982 for the state and nation, however, do intimate that recovery is in sight, but Kansans are advised to regard those signs cautiously, for, as will be discussed, the way to a strong recovery in Kansas, particularly in respect to employment, is a strong aircraft industry. As yet, by no means a certainty.

In the 1980 and 1981-82 recessions (the shaded areas in Figure 1), Kansas' unemployment rate remained below the national average. In early 1982, however, the Kansas unemployment rate began to increase faster than the nation's, thereby narrowing the gap between the state and U.S. averages. Much of this rapid rise in unemployment for the state can be attributed to the labor market experience in Wichita. What is remarkable about Wichita's reaction to the recession was the swiftness of its response. While the nation's unemployment rate steadily climbed at a rate of increase slightly below 25 percent over 1982 (see Table 1), the city's rate ascended precipitously, more than doubling over the year. During this time, the state's unemployment rate experienced a sharp rise of over 50 percent, twice the rate of increase than in the nation. At the other extreme, unemployment in the Kansas portion of Kansas City grew but, by comparison, only modestly.

Table 1
Percentage Change in Unemployment Rates

	December 1981	December 1982	Percent Change
U.S.	8.8	10.8	23%
Kansas	4.1	6.3	54
Wichita	4.0	9.7	143
Kansas City	4.6	5.1	11

Figure 1
Seasonally Unadjusted Unemployment Rates, 1980-Present

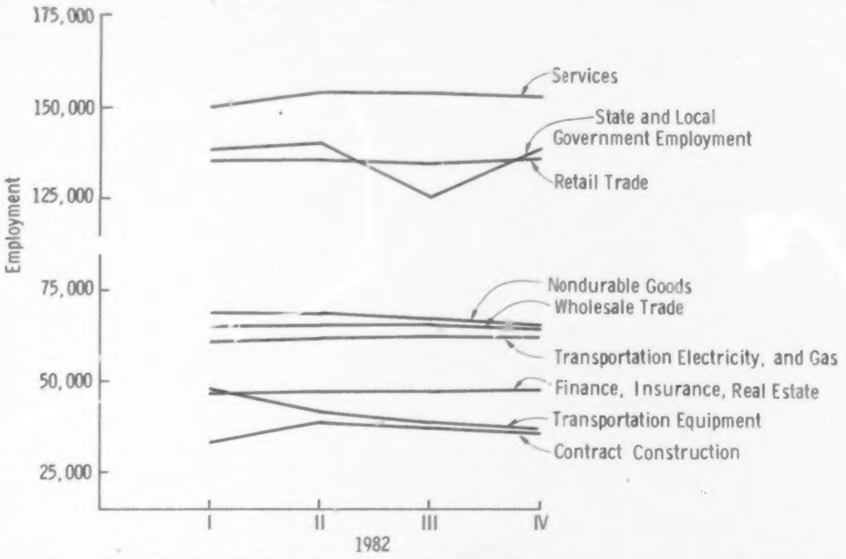


The reasons for the diverse statewide growth rates in unemployment are evident when employment in 1982 is examined by major sectors. Most sectors exhibited relatively stable employment but for three notable exceptions (see Figure 2). The variations in two of these three—contract construction and state and local government—were due predominantly to seasonal factors. That is, the third quarter dip in government employment reflects the summer layoffs for teachers, and the peaks and valleys of construction employment record, in great part, the effects of weather conditions. Employment in the third exception—the transportation equipment sector—declined throughout 1982, particularly in the first two quarters, due, in this case, to more purely economic factors. Given its dominant aircraft component, this sector's performance is closely tied to Wichita's economy, an economy not only affected by the national cycle but perhaps more so by international economic conditions.

Since the sectors shown in Figure 2 represent over 90 percent of the state's nonagricultural employment, they provide a relatively comprehensive indication of employment trends in Kansas and, in particular, of the importance of employment in the transportation equipment industry.

Many analysts have asserted that the 1981-82 recession was the result of a change in economic policy to combat inflation. This objective was attained to a considerable degree in 1982 with inflation moderating both nationally and in Kansas. The decline in Kansas, however, was apparently not as strong as that nationwide. The value of CPI-U for Kansas City rose 6.3 percent during 1982.

Figure 2
1982 Kansas Employment by Sector



Nationally, CPI-U increased only 3.9 percent. Although no inflation measure is available for Kansas on a statewide level, extrapolating from the Kansas City measure suggests that Kansans faced more rapidly rising prices on average in 1982 than did the rest of the U.S. Price changes in Kansas (again, as measured by CPI-U in Kansas City) were somewhat more volatile in 1982 relative to those nationwide. This assertion can be borne out by referencing the quarterly inflation data summarized on this issue's back cover.

Other economic indicators for the state in 1982 also provide a somewhat hazy picture of the economy. Although the dollar value of loans and personal income registered consistently modest gains throughout 1982, tending to give cause for optimism, at the same time new unemployment claims persisted at high levels. Retail sales, which made modest declines in the year's first two quarters, increased modestly in the last two.

In general, the increasing loan activity, retail sales, and personal income give some hint that the Kansas economy in 1983 may be better than in 1982. However, as discussed, the strength of the recovery will depend heavily on the performance of the aircraft industry.

Nancy Brown Johnson
Research Assistant
The Institute for Economic
and Business Research

Agriculture

A Final Look at 1982

Farm income declined in 1982, as had been projected, for the third consecutive year. Most recent estimates suggest that total cash receipts fell about 1.0 percent for the year to $142 billion. Cash receipts from crops were off 3.0 percent for the year, their decline occasioned, to a significant degree, by a substantial (12 percent) decrease in food grain (primarily wheat and rice) receipts. The loss in income from crops was somewhat offset by a 1.0 percent increment in total livestock receipts due to improved income from beef and hog production.

Net cash income for 1982 was $31 billion, down 2.0 percent from last year. The decline was mitigated by moderating production expenses, which rose only about 2.0 percent in 1982, and by a substantial increase in direct government payments to farmers—$4.0 billion in 1982 compared to $1.9 billion in 1981.

Although it is too early to accurately forecast farm income for 1983, the early indications are not positive. Huge grain carryovers plus a continued weak world economy are expected to have a further depressing influence on crop prices. On the positive side, however, feeding margins are expected to remain satisfactory for beef and hogs, so livestock receipts are likely to increase slightly. And production expenses are only expected to rise at a rate of 2.0-4.0 percent in 1983.

Kansas agriculture did fare somewhat better in 1982 relative to the rest of the country. For

Table 2
Commercial Hog and Beef Production in Kansas

	Quarterly		Annual	
	1981:4	1982:4	1981	1982
Commercial cattle				
Head (1000)	900.1	1084.8	3,618.8	4,290.0
Millions of lbs.	999.65	1194.0	3,950.3	4,652.1
Commercial Hogs				
Head (1000)	448.6	141.5	1,515.6	938.3
Millions of lbs.	110.6	37.8	371.5	235.1

Table 3
Prices for Major Kansas Farm Commodities

Commodity	Jan. 15 1983	Dec. 1982	Pct. Change	Jan. 1982	Pct. Change
Winter Wheat (bu.)	$ 3.54	$ 3.49	1.4%	$ 3.81	−7.1%
Corn (bu.)	2.66	2.74	−2.9	2.54	4.7
Soybeans (bu.)	5.34	5.29	0.8	5.86	−8.9
Sorghum Grain (cwt.)	4.07	3.94	3.2	3.89	4.6
Beef Cattle (cwt.)	58.50	54.80	6.8	55.40	5.6
Hogs (cwt.)	54.80	52.90	3.6	43.70	25.4

example, the record 462 million bushel wheat crop will help offset the poor price performance for wheat expected throughout the marketing year. On the other hand, the final crop figures for the fall 1982 harvest show that sorghum grain production at 207.7 million bushels was 13 percent below a year earlier and that corn output totaled 140.2 million bushels, down 5.0 percent from last year. These summary figures also show that the soybean harvest, however, was a record 47.1 million bushels and that prices for corn and sorghum held close to year-earlier levels while soybeans sold up to $0.50 cheaper than last year. On net, Kansas receipts from the 1982 crop year will be up over last year, principally due to the dramatic improvement in wheat production.

The real boost to Kansas farm income over 1982-83, however, is coming from the livestock sector with beef in particular playing a dominant role. Production data for commercial cattle and hogs is contained in Table 2. These data show that Kansas cattle production in 1982 was up 700 million lbs. (18 percent) over last year. Production in the most recently completed quarter was up almost 20 percent from the previous year. The market price for all cattle fluctuated in the $55.00-60.00 range over 1982 and was, on average, quite comparable to 1981's prices. As a result, cash receipts from beef production rose in 1982 by 15-20 percent in Kansas.

Hog output in the state was down markedly in 1982, a trough year in the hog production cycle. Production was off by nearly two thirds in the fourth quarter relative to 1981 and by over one third (36.7 percent) for all of 1982. Prices, however, averaged around 25 percent higher in 1982 than in 1981, so the income decline in pork was small and insignificant relative to the gain in beef receipts.

Outlook

Nationally, both the Index of Prices Received and the Index of Prices Paid rose one point in January; however, this increase still left January 1983 prices received 3.1 percent below last year. Price movements nationally for grains seem to be following the traditional seasonal pricing pattern and, consequently, are trending upward as the winter wears on. After falling sharply in the fall, cattle and hog prices have once again been on the rise during the last two months.

In turn, farm prices in Kansas are following the national trend with some minor exceptions. All major crop and livestock prices were up in January over December except for corn. More detailed price information for Kansas is contained in Table 3 which shows that the most significant price gains in January were in livestock. Relative to year-ago prices, hogs are up sharply with corn, sorghum, and beef registering more modest gains. Both soybeans and wheat prices, however, are lower than year-ago levels.

Looking ahead, 13.2 million acres of winter wheat have been seeded in Kansas, down 8.0 percent from last year. Nationally, acreage is at 63 million acres, down 5.0 percent from last year's record planting. These reductions, which imply either greater compliance with government set-aside programs or farmer disenchantment with wheat due to its poor price performance, are not expected to substantially shore up prices due to the huge build up of stocks and expected record carryovers. Current projections are for prices to remain in the $3.40-$3.50 range.

At the time of this writing (mid-February), projected spring planting estimates for other grains are not available, although preliminary figures will be out by the time of publication. Some of the reduced wheat acreage in Kansas is likely to find its way into production of corn, sorghum, or beans.

Numbers of cattle on feedlots in the 13 quarterly reporting states is up 14 percent over last year and 4.0 percent from two years ago. The magnitude of this increase caught a number of analysts by surprise. Placements on to feedlots during the fourth quarter of 1981 were also up 16 percent compared to last year.

These numbers foreshadow greater beef production beginning in the second half of the year, perhaps causing prices to weaken and fall below the $64-70 range now being projected. In the meantime, this rush to the feedlots should provide some price enhancement over the winter and spring months for feed grains.

Cattle on Kansas feedlots are also up relative to recent periods, and the placement rate has been improving steadily as well. Table 4 provides the details: cattle on feed in January 1983 numbered 1.32 million, up 19 percent from the previous January, and placements for 1982:4 were up 32 percent from a year ago.

These numbers represent money in the bank for Kansas agriculture. With stable or slightly improving prices and increased production forthcoming, beef should stimulate another year of moderately rising farm income for the state

Richard Sexton
Research Economist
The Institute for Economic and Business Research

Table 4
The Kansas Cattle Situation

Cattle on Feed		Placements on Feed	
Period	Number (Thousands)	Quarters	Number (Thousands)
Jan. 1981	1100	1981: 4	701
Jan. 1982	1110	1982: 1	822
Apr. 1982	1130	2	929
July 1982	1280	3	900
Oct. 1982	1270	4	925
Jan. 1983	1320		

TABLE I. NATIONAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
A. INCOME MEASURES						
GROSS NATIONAL PRODUCT	BIL.'72$	(Q)	3RD	1481.2	0.8	-2.3
DISPOSABLE PERSONAL INCOME	BIL.'72$	(Q)	3RD	1060.9	2.3	1.7
PERSONAL CONSUMPTION	BIL.'72$	(Q)	3RD	207.6	-312.9	-78.4
GROSS PRIVATE INVESTMENT	BIL.'72$	(Q)	3RD	1458.1	2501.7	558.3
NET EXPORT OF GOODS & SERV.	BIL.'72$	(Q)	3RD	30.7	-82.7	-22.9
PERSONAL SAVINGS	BIL.'72$	(Q)	2ND	149.4	144.3	40.2
SAVINGS RATE*	%	(Q)	2ND	6.9	1.6	1.6
B. LABOR FORCE						
CIVILIAN LABOR FORCE	MIL.	(M)	DEC.	111.1	0.4	2.0
EMPLOYED	MIL.	(M)	DEC.	99.1	-0.2	1.9
UNEMPLOYED	MIL.	(M)	DEC.	12.0	10.1	26.3
UNEMPLOYMENT RATES*						
ALL	%	(M)	DEC.	10.8	0.1	1.9
MEN	%	(M)	DEC.	10.1	0.1	2.1
WOMEN	%	(M)	DEC.	9.2	0.2	1.9
TEENS	%	(M)	DEC.	24.5	0.3	2.8
BLACKS	%	(M)	DEC.	20.8	0.6	4.7
WHITES	%	(M)	DEC.	9.7	0.1	1.9
C. PRODUCTION						
INDUSTRIAL PRODUCTION		(M)	NOV.	137.8	-12.9	-7.6
DURABLE PRODUCTION		(M)	NOV.	[illegible]	-8.9	-2.2
HOUSING STARTS**	TH.	(M)	NOV.	114.8	[illegible]	34
AUTO SALES		(M)	SEP.	8.3	110.5	-20.2
D. PRICES						
1. CONSUMER PRICES						
CPI-W, ALL ITEMS	1967=100	(M)	NOV.	293.2	-0.5	4.6
CPI-U, ALL ITEMS	1967=100	(M)	OCT.	294.1	3.3	5.1
FOOD	1967=100	(M)	NOV.	279.4	-2.1	0.8
HOUSING	1967=100	(M)	NOV.	319.4	-6.7	5.0
APPAREL	1967=100	(M)	NOV.	194.4	-0.4	1.6
TRANSPORTATION	1967=100	(M)	NOV.	297.3	1.2	2.8
MEDICAL	1967=100	(M)	NOV.	339.8	11.8	10.3
2. PRODUCER PRICES						
ALL COMMODITIES	1967=100	(M)	DEC.	300.6	0.8	1.6
INDUSTRIAL COMMODITIES	1967=100	(M)	DEC.	315.0	-0.4	1.6
CRUDE MATERIALS	1967=100	(M)	DEC.	312.6	-3.1	0.3
CAPITAL EQUIPMENT	1967=100	(M)	DEC.	285.1	4.6	4.0
3. AGRICULTURAL PRICES						
PRICES RECEIVED	1977=100	(M)	JAN.	128.0	9.4	-3.8
PRICES PAID	1977=100	(M)	JAN.	157.0	7.7	1.9
PARITY RATIO	1977=100	(M)	JAN.	82.0	14.8	-4.7
E. BANKING AND FINANCE						
1. MONEY SUPPLY MEASURES						
M 1	BIL.$	(W)	JAN.28	485.9	26.8	8.6
2. MONEY SUPPLY COMPONENTS						
CURRENCY	BIL.$	(W)	JAN.28	134.2	14.3	8.1
TOTAL CHECKABLE DEPOSITS	BIL.$	(W)	JAN.28	347.3	30.6	9.0
TOTAL TIME DEPOSITS	BIL.$	(W)	JAN.21	769.3	-83.4	1.3
3. INTEREST RATES*						
PRIME RATE	%	(W)	JAN.28	11.0	0.	-5.5
DISCOUNT RATE	%	(W)	JAN.28	8.5	0.	-3.5
HOME MORTGAGE RATE	%	(M)	JAN.	13.0	-0.4	-4.3
90 DAY CD'S	%	(W)	FEB.4	8.7	0.1	-6.5
3 MONTH T-BILLS	%	(W)	FEB.4	8.1	0.1	-6.6

*NUMBERS IN PERCENT CHANGE COLUMN INDICATE ABSOLUTE CHANGE OF THE INDICATOR.

NOTE: PERCENT CHANGE COLUMN IN THIS TABLE INDICATES THE AVERAGE ANNUAL PERCENT CHANGE UNLESS INDICATED. ** INDICATES CHANGE IS NOT AT ANNUAL RATE.

TABLE II. GENERAL BUSINESS INDICATORS FOR KANSAS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MANUFACTURING						
AVERAGE WORK WEEK	HRS.	(M)	DEC.	38.6	1.3	-4.9
AVERAGE WEEKLY EARNINGS	HRS.	(M)	DEC.	355.1	1.8	3.1
INITIAL CLAIMS FOR UNEMPLOYMENT INSURANCE	TH.	(M)	DEC.	22279.0	21.4	24.2
NEW INCORPORTATIONS						
IN-STATE FOR PROFIT		(M)	DEC.	649.0	120.7	40.2
OUT-OF-STATE FOR PROFIT		(M)	DEC.	134.0	31.4	13.6

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
KANSAS SECRETARY OF STATE

TABLE III. EMPLOYMENT AND INCOME IN KANSAS

INDUSTRY			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL INDUSTRIES	TH.	(M)	DEC.	916.9	-0.1	-4.0
MANUFACTURING	TH.	(M)	DEC.	156.2	-0.8	-15.4
DURABLE GOODS	TH.	(M)	DEC.	90.5	-1.3	-21.7
STONE, CLAY, GLASS	TH.	(M)	DEC.	6.5	0.	-5.8
PRIMARY METALS	TH.	(M)	DEC.	2.4	-4.0	-29.4
FABRICATED METAL PRODUCTS	TH.	(M)	DEC.	10.5	-0.9	-14.6
MACHINERY (INCL. ELEC.)	TH.	(M)	DEC.	24.5	-1.2	-26.9
TRANSPORTATION EQUIPMENT	TH.	(M)	DEC.	37.2	-1.6	-23.6
AIRCRAFT AND PARTS	TH.	(M)	DEC.	28.5	-1.7	-32.0
OTHER DURABLE GOODS	TH.	(M)	DEC.	9.4	-1.1	-13.0
NONDURABLE GOODS	TH.	(M)	DEC.	65.7	-0.2	-4.4
FOOD AND KINDRED PRODUCTS	TH.	(M)	DEC.	25.2	0.	4.1
MEAT PRODUCTS	TH.	(M)	DEC.	10.6	-0.9	6.0
APPAREL	TH.	(M)	DEC.	3.4	-2.9	-2.9
PRINTING AND PUBLISHING	TH.	(M)	DEC.	15.6	2.0	-6.0
CHEMICALS	TH.	(M)	DEC.	7.9	0.	-9.2
PETROLEUM AND COAL	TH.	(M)	DEC.	4.5	0.	-10.0
OTHER NONDURABLE	TH.	(M)	DEC.	9.1	-3.2	-15.0
MINING	TH.	(M)	DEC.	17.9	1.7	-8.7
OIL AND GAS EXTRACTION	TH.	(M)	DEC.	15.8	1.9	-14.1
CONTRACT CONSTRUCTION	TH.	(M)	DEC.	35.0	-5.4	-14.2
TRANS., COMM., ELEC., GAS	TH.	(M)	DEC.	63.7	1.9	1.1
WHOLESALE TRADE	TH.	(M)	DEC.	63.7	-0.6	-2.5
RETAIL TRADE	TH.	(M)	DEC.	163.7	0.9	-3.6
FINANCE, INSURANCE, REAL EST.	TH.	(M)	DEC.	47.8	0.	0.4
SERVICES	TH.	(M)	DEC.	179.0	-0.2	2.8
FEDERAL GOVERNMENT	TH.	(M)	DEC.	25.3	0.	-1.2
STATE AND LOCAL GOVERNMENT	TH.	(M)	DEC.	164.4	0.	2.0
PERSONAL INCOME*	MIL.$	(Q)	3RD	27597.0	6.7	8.1

*PERCENT CHANGE COLUMN INDICATES AVERAGE ANNUAL RATE.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
BUREAU OF ECONOMIC ANALYSIS

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TABLE IV. CONSUMER PRICES--KANSAS CITY
CPI FOR ALL URBAN CONSUMERS (CPI-U)

CATEGORY		LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL ITEMS*	1967=100 (B)	DEC.	290.6	0.4	6.3
FOOD AND BEVERAGE	1967=100 (B)	DEC.	276.9	-0.3	2.0
HOUSING	1967=100 (B)	DEC.	313.6	1.4	8.7
APPAREL AND UPKEEP	1967=100 (B)	DEC.	206.3	1.6	5.5
TRANSPORTATION	1967=100 (B)	DEC.	282.2	-1.1	2.3
MEDICAL CARE	1967=100 (B)	DEC.	350.5	-0.9	14.5

*ALL PERCENT CHANGES ARE FROM TWO MONTHS PREVIOUS.

SOURCE: BUREAU OF LABOR STATISTICS

TABLE V. EMPLOYMENT AND SALES DATA FOR KANSAS, STATE AND AREAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
KANSAS--STATEWIDE						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	1194.7	-0.5	-1.6
EMPLOYED	TH.	(M)	DEC.	1121.0	-0.6	-3.3
FARM	TH.	(M)	DEC.	48.1	-8.0	-22.7
UNEMPLOYED	TH.	(M)	DEC.	73.7	1.4	53.2
RATE*	%	(M)	DEC.	6.2	0.2	2.2
RETAIL SALES	MIL.$	(M)	DEC.	1137.9	0.8	0.7
WICHITA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	222.8	-0.6	-2.1
EMPLOYED	TH.	(M)	DEC.	203.9	-0.7	-6.6
FARM	TH.	(M)	DEC.	1.9	-9.5	-5.0
UNEMPLOYED	TH.	(M)	DEC.	18.9	0.5	105.4
RATE*	%	(M)	DEC.	8.5	0.1	4.1
RETAIL SALES	MIL.$	(M)	DEC.	226.5	2.8	-3.9
KANSAS PORTION OF KANSAS CITY SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	279.6	0.0	1.5
EMPLOYED	TH.	(M)	DEC.	266.6	0.1	1.3
FARM	TH.	(M)	DEC.	1.0	-9.1	0.
UNEMPLOYED	TH.	(M)	DEC.	13.0	-0.8	6.6
RATE*	%	(M)	DEC.	4.6	-0.1	0.2
RETAIL SALES	MIL.$	(M)	DEC.	208.4	1.5	6.8
TOPEKA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	93.2	-0.1	-1.5
EMPLOYED	TH.	(M)	DEC.	87.3	-0.2	-2.7
FARM	TH.	(M)	DEC.	1.4	-6.7	0.
UNEMPLOYED	TH.	(M)	DEC.	5.9	1.7	20.4
UNEMPLOYMENT RATE*	%	(M)	DEC.	6.3	0.1	1.1
RETAIL SALES	MIL.$	(M)	DEC.	83.4	-2.5	6.7
LAWRENCE SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	34.3	-0.6	-2.3
EMPLOYED	TH.	(M)	DEC.	32.8	-0.6	-2.7
FARM	TH.	(M)	DEC.	0.6	0.	0.
UNEMPLOYED	TH.	(M)	DEC.	1.5	0.	7.1
RATE*	%	(M)	DEC.	4.4	0.1	0.4
RETAIL SALES	MIL.$	(M)	DEC.	26.1	-0.9	5.7
RILEY COUNTY--MANHATTAN AREA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	21.8	-2.2	2.2
EMPLOYED	TH.	(M)	DEC.	20.9	-1.9	1.3
FARM	TH.	(M)	DEC.	0.8	-9.1	0.
UNEMPLOYED	TH.	(M)	DEC.	1.0	-2.0	40.0
RATE*	%	(M)	DEC.	4.5	-0.1	1.2
RETAIL SALES	MIL.$	(M)	DEC.	16.0	-0.2	-1.0
RENO COUNTY--HUTCHINSON AREA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	30.8	-0.3	0.3
EMPLOYED	TH.	(M)	DEC.	27.5	-4.2	-6.1
FARM	TH.	(M)	DEC.	1.0	-9.1	0.
UNEMPLOYED	TH.	(M)	DEC.	3.3	18.2	124.1
RATE*	%	(M)	DEC.	10.6	3.4	5.9
RETAIL SALES	MIL.$	(M)	DEC.	30.6	2.8	0.1
CRAWFORD COUNTY--PITTSBURG AREA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	16.5	-0.6	0.
EMPLOYED	TH.	(M)	DEC.	15.4	-0.6	-1.3
FARM	TH.	(M)	DEC.	0.6	-7.1	0.
UNEMPLOYED	TH.	(M)	DEC.	1.1	0.	29.4
RATE*	%	(M)	DEC.	6.8	0.2	1.6
RETAIL SALES	MIL.$	(M)	DEC.	12.0	2.0	-4.5
LYON COUNTY--EMPORIA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	17.8	-0.6	-2.2
EMPLOYED	TH.	(M)	DEC.	16.9	-0.6	-2.9
FARM	TH.	(M)	DEC.	0.6	-7.4	-10.0
UNEMPLOYED	TH.	(M)	DEC.	0.9	-10.2	3.5
RATE*	%	(M)	DEC.	4.9	-0.5	0.2
RETAIL SALES	MIL.$	(M)	DEC.	15.9	3.7	6.0
SALINE COUNTY--SALINA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	25.5	-1.2	-3.8
EMPLOYED	TH.	(M)	DEC.	23.7	-0.8	-4.0
FARM	TH.	(M)	DEC.	0.5	-8.6	-11.7
UNEMPLOYED	TH.	(M)	DEC.	1.7	-5.6	21.4
RATE*	%	(M)	DEC.	6.7	-0.3	1.3
RETAIL SALES	MIL.$	(M)	DEC.	28.6	3.0	0.2
BARTON COUNTY--GREAT BEND AREA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	19.5	-0.8	4.0
EMPLOYED	TH.	(M)	DEC.	18.5	-1.1	-1.1
FARM	TH.	(M)	DEC.	0.7	-10.3	0.
UNEMPLOYED	TH.	(M)	DEC.	1.0	0.	111.1
UNEMPLOYMENT RATE*	%	(M)	DEC.	4.9	0.1	2.6
RETAIL SALES	MIL.$	(M)	DEC.	26.7	2.3	-24.8
MONTGOMERY COUNTY--COFFEYVILLE AREA						
CIVILIAN LABOR FORCE	TH.	(M)	DEC.	20.2	-0.5	-6.9
EMPLOYED	TH.	(M)	DEC.	17.4	-1.1	-15.9
FARM	TH.	(M)	DEC.	0.4	-10.0	-6.3
UNEMPLOYED	TH.	(M)	DEC.	2.8	1.1	183.7
RATE*	%	(M)	DEC.	14.1	0.6	10.4
RETAIL SALES	MIL.$	(M)	DEC.	16.4	4.7	-10.8

*ALL RATE CHANGES INDICATE ABSOLUTE CHANGES INSTEAD OF PERCENT.

NOTE: ALL RETAIL SALES FIGURES ARE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VI. KANSAS AGRICULTURAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
PRICES RECEIVED						
ALL FARM PRODUCTS	1967=100	(M)	DEC.	124.0	-1.6	-48.3
ALL CROPS	1967=100	(M)	DEC.	122.0	1.7	-51.0
WHEAT	$/BU.	(M)	DEC.	3.4	1.8	-12.0
SORGHUM GRAIN	$/CWT.	(M)	DEC.	3.9	3.4	5.3
CORN	$/BU.	(M)	DEC.	2.6	0.	2.8
SOYBEANS	$/BU.	(M)	DEC.	5.2	1.7	-8.6
ALL HAY	$/TON	(M)	DEC.	57.0	1.8	5.6
LIVESTOCK AND PRODUCTS	1967=100	(M)	DEC.	126.0	-2.3	-46.2
ALL BEEF CATTLE	$/CWT.	(M)	DEC.	50.8	-3.8	-2.1
STEERS AND HEIFERS	$/CWT.	(M)	DEC.	56.2	-2.6	-0.4
CALVES	$/CWT.	(M)	DEC.	58.0	-4.8	-2.5
HOGS	$/CWT.	(M)	DEC.	51.0	1.4	16.7
MILK		(M)	DEC.	14.5	1.4	0.
PRICES PAID						
HOG CONC. (38%-42%)	$/CWT.	(M)	DEC.	14.1	4.4	-2.8
BEEF CATTLE CONC. (32%-36%)	$/CWT.	(M)	DEC.	11.3	2.7	2.7
MILK/FEED PRICE RATIO		(M)	DEC.	1.6	3.9	3.2

SOURCES: FARM FINANCE, KCLRS
CROPS, KCLRS
LIVESTOCK ON FEED, KCLRS
BUREAU OF ECONOMIC ANALYSIS

TABLE VII. RETAIL SALES SUBJECT TO SALES TAX BY BUSINESS CLASSIFICATION*

BUSINESS CLASSIFICATION			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
APPAREL	MIL.$	(M)	DEC.	33.9	5.5	9.5
AUTOMOTIVE	MIL.$	(M)	DEC.	208.2	0.7	0.6
FOOD	MIL.$	(M)	DEC.	279.0	-0.6	4.2
FURNITURE	MIL.$	(M)	DEC.	47.4	4.4	2.7
GENERAL MERCHANDISE	MIL.$	(M)	DEC.	176.5	13.0	8.4
LUMBER & BUILDING MATERIALS	MIL.$	(M)	DEC.	92.9	3.2	1.3
PROF. & PERSONAL SERVICE	MIL.$	(M)	DEC.	58.4	2.1	13.8
PUBLIC UTILITIES	MIL.$	(M)	DEC.	61.4	-5.6	6.6
UNCLASSIFIED	MIL.$	(M)	DEC.	108.6	-1.3	0.6
FARM AND GARDEN PRODUCTS	MIL.$	(M)	DEC.	1.1	8.3	13.1
MANUFACTURING AND TRADING	MIL.$	(M)	DEC.	81.2	3.8	-18.6
MISCELLANEOUS	MIL.$	(M)	DEC.	4.5	-8.1	25.4
TOTAL	MIL.$	(M)	DEC.	1153.7	2.2	2.3

*ALL FIGURES ARE THE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VIII. BANKING AND FINANCIAL ACTIVITY IN KANSAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MEMBER COMMERCIAL BANKS						
STATEWIDE						
TOTAL LOANS	MIL.$	(M)	DEC.	4205.0	0.6	8.8
TOTAL DEPOSITS	MIL.$	(M)	DEC.	7210.0	3.9	9.6
DEMAND DEPOSITS	MIL.$	(M)	DEC.	1862.0	7.7	0.4
TIME AND SAVINGS	MIL.$	(M)	DEC.	5348.0	2.7	13.2
KANSAS CITY, KANSAS*						
TOTAL LOANS	MIL.$	(M)	DEC.	219.5	1.9	12.0
REAL ESTATE	MIL.$	(M)	DEC.	23.8	-6.3	13.3
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	DEC.	58.1	10.2	21.0
CONSUMER	MIL.$	(M)	DEC.	42.4	1.7	-7.8
TOTAL DEPOSITS	MIL.$	(M)	DEC.	354.7	3.9	8.1
DEMAND DEPOSITS	MIL.$	(M)	DEC.	110.1	9.0	6.9
TIME AND SAVINGS	MIL.$	(M)	DEC.	244.6	1.8	8.7
TOPEKA*						
TOTAL LOANS	MIL.$	(M)	DEC.	277.9	-0.2	6.9
REAL ESTATE	MIL.$	(M)	DEC.	55.6	0.2	26.4
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	DEC.	135.0	-0.6	7.1
CONSUMER	MIL.$	(M)	DEC.	48.5	-0.8	15.5
TOTAL DEPOSITS	MIL.$	(M)	DEC.	432.7	4.8	4.5
DEMAND DEPOSITS	MIL.$	(M)	DEC.	166.0	7.1	3.8
TIME AND SAVINGS	MIL.$	(M)	DEC.	266.7	3.4	5.4
WICHITA*						
TOTAL LOANS	MIL.$	(M)	DEC.	836.7	1.7	9.1
REAL ESTATE	MIL.$	(M)	DEC.	114.5	1.1	6.0
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	DEC.	379.2	1.6	9.9
CONSUMER	MIL.$	(M)	DEC.	234.0	3.4	7.3
TOTAL DEPOSITS	MIL.$	(M)	DEC.	1368.8	10.3	11.9
DEMAND DEPOSITS	MIL.$	(M)	DEC.	525.8	10.5	0.9
TIME AND SAVINGS	MIL.$	(M)	DEC.	843.0	10.1	20.1
SAVINGS AND LOANS--STATEWIDE						
LOANS MADE	MIL.$	(M)	DEC.	69.3	57.5	65.4
NET GAIN IN SAVINGS**	MIL.$	(M)	DEC.	123.1	133.2	158.6
SAVINGS AND LOANS--CITIES						
KANSAS CITY, KANSAS						
LOANS MADE	MIL.$	(M)	DEC.	13.9	183.7	148.2
NET GAIN IN SAVINGS**	MIL.$	(M)	DEC.	3.4	8.6	11.3
TOPEKA						
LOANS MADE	MIL.$	(M)	DEC.	9.3	8.1	57.6
NET GAIN IN SAVINGS**	MIL.$	(M)	DEC.	48.6	67.0	53.8
WICHITA						
LOANS MADE	MIL.$	(M)	DEC.	20.2	98.0	137.6
NET GAIN IN SAVINGS**	MIL.$	(M)	DEC	30.0	35.7	35.2

*ONLY LARGE COMMERCIAL BANKS ARE INCLUDED.

**NUMBERS IN PERCENT CHANGE COLUMNS INDICATE ABSOLUTE CHANGE.

TABLE IX BANKING AND FINANCIAL ACTIVITY IN KANSAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
AGGREGATED STATEWIDE DATA						
STATEWIDE						
TOTAL LOANS	MIL.$	(Q)	3rd	9,422.5	2.7	10.1
TOTAL DEPOSITS	MIL.$	(Q)	3rd	15,497.9	3.6	9.2
DEMAND DEPOSITS	MIL.$	(Q)	3rd	3,320.7	3.3	(-3.2)
TIME AND SAVINGS	MIL.$	(Q)	3rd	12,177.1	3.7	13.2
KANSAS CITY, KANSAS*						
TOTAL LOANS	MIL.$	(Q)	3rd	1,534.9	5.6	13.6
REAL ESTATE	MIL.$	(Q)	3rd	525.7	3.2	10.5
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	3rd	437.6	10.1	23.6
CONSUMER	MIL.$	(Q)	3rd	383.3	3.1	4.9
TOTAL DEPOSITS	MIL.$	(Q)	3rd	2,324.2	3.3	10.9
DEMAND DEPOSITS	MIL.$	(Q)	3rd	469.6	3.4	2.3
TIME AND SAVINGS	MIL.$	(Q)	3rd	1,854.6	3.3	13.4
TOPEKA						
TOTAL LOANS	MIL.$	(Q)	3rd	615.3	.5	8.2
REAL ESTATE	MIL.$	(Q)	3rd	138.1	1.1	1.2
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	3rd	242.5	1.9	12.3
CONSUMER	MIL.$	(Q)	3rd	125.8	5.3	(-2.6)
TOTAL DEPOSITS	MIL.$	(Q)	3rd	996.6	6.2	2.6
DEMAND DEPOSITS	MIL.$	(Q)	3rd	259.9	9.6	(-5.7)
TIME AND SAVINGS	MIL.$	(Q)	3rd	736.6	5.5	5.9
WICHITA*						
TOTAL LOANS	MIL.$	(Q)	3rd	1,524.3	.3	8.4
REAL ESTATE	MIL.$	(Q)	3rd	334.4	.3	3.8
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	3rd	654.4	(-1.6)	13.4
CONSUMER	MIL.$	(Q)	3rd	361.3	.6	(-1.5)
TOTAL DEPOSITS	MIL.$	(Q)	3rd	2,470.8	4.7	6.1
DEMAND DEPOSITS	MIL.$	(Q)	3rd	769.0	2.7	(-6.9)
TIME AND SAVINGS	MIL.$	(Q)	3rd	1,701.8	5.7	13.2

* This table includes data for all those commercial banks in Kansas required to report transactions to the Federal Reserve or the FDIC. It represents, therefore, a much more comprehensive, but less timely, compilation than that reported in Table VIII.

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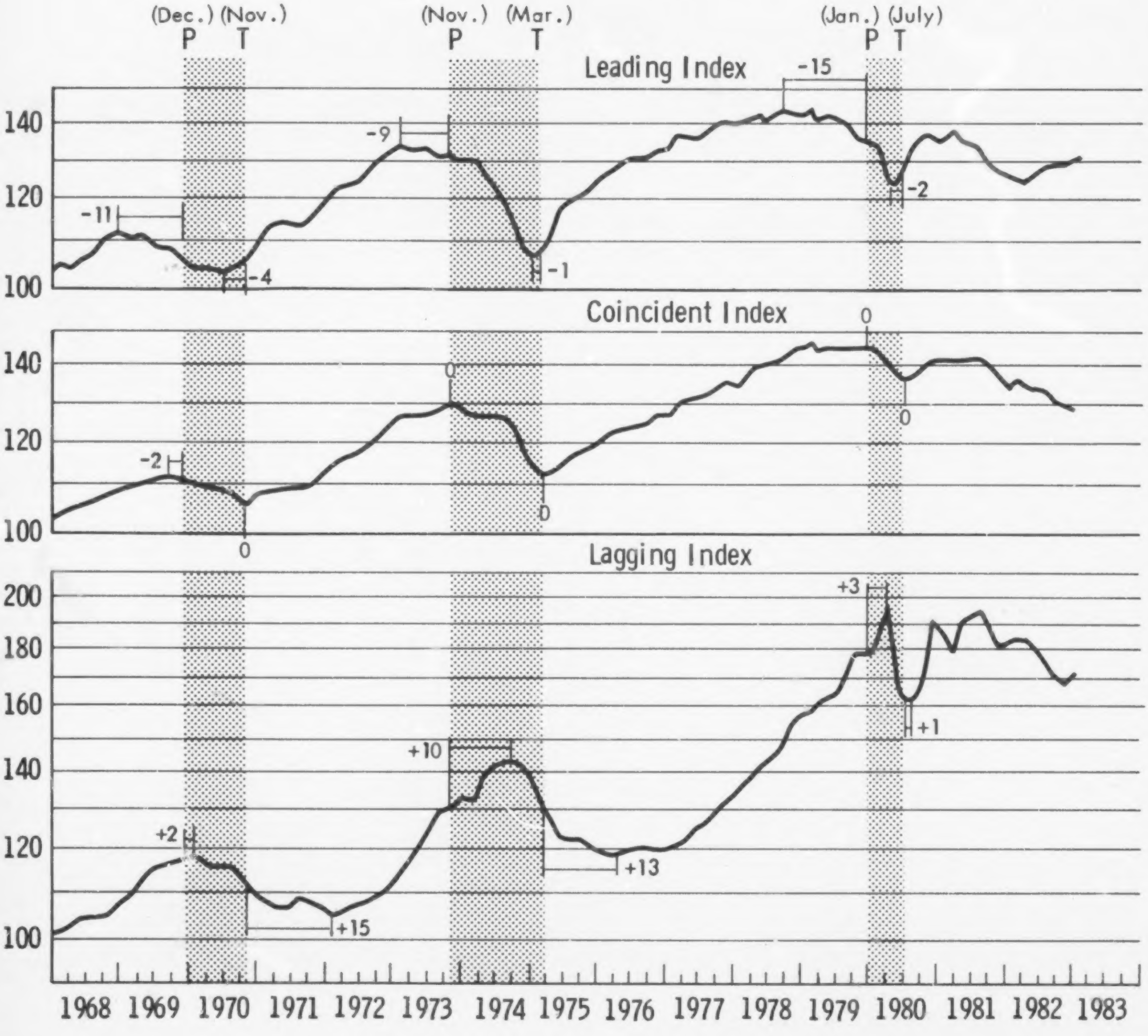

The University of Kansas
Kansas Business Review
January-February 1983 Vol. 6 No. 3
Published bimonthly by the University
of Kansas, The Institute for Economic
and Business Research, Lawrence, Kansas 660

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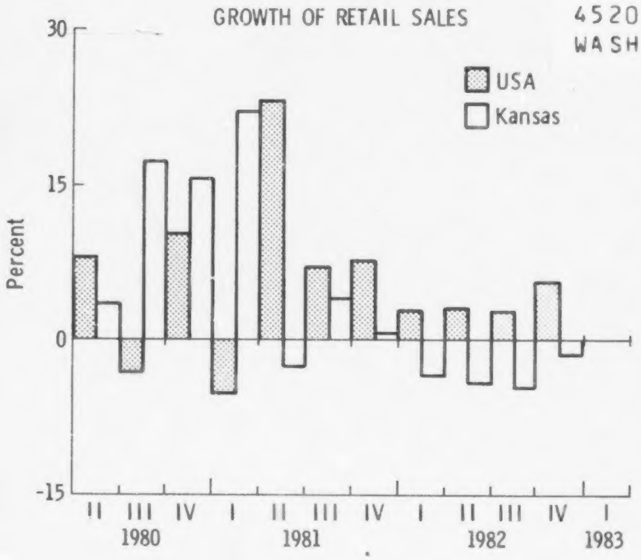

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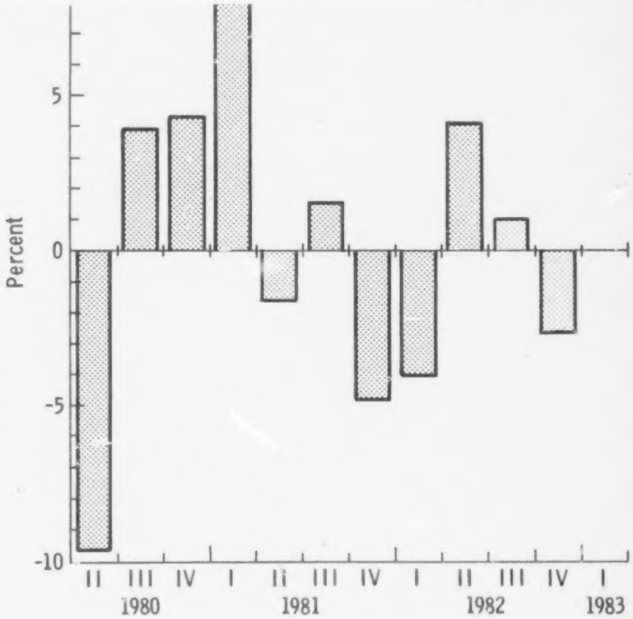

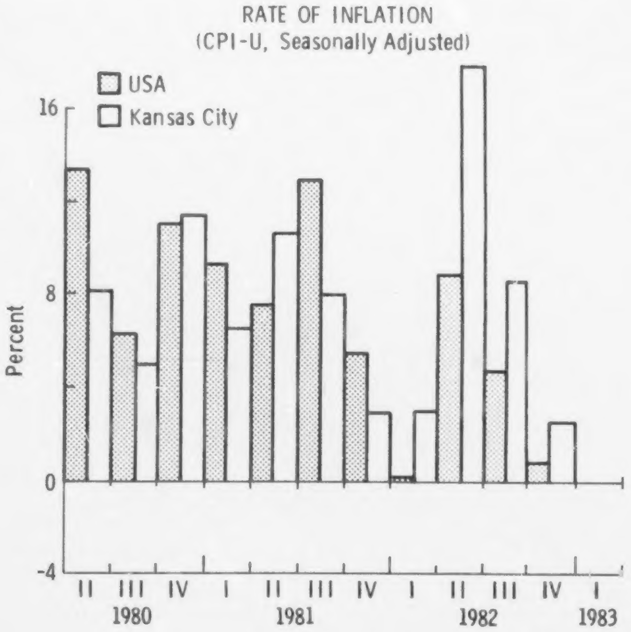

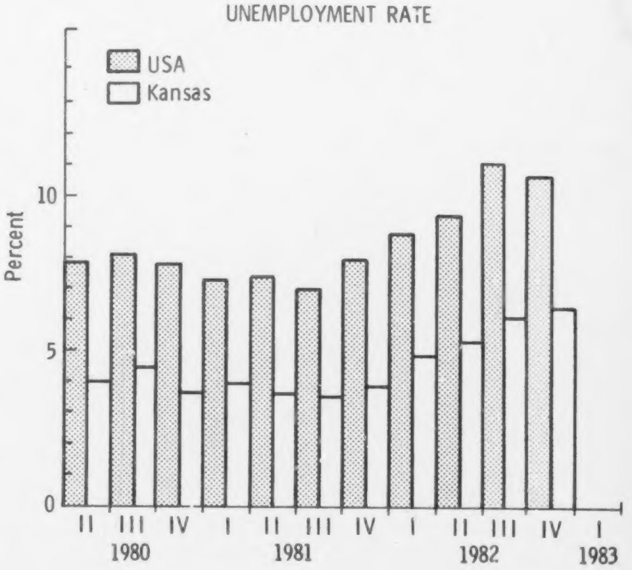

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March, April-May, June 1983

KANSAS BUSINESS REVIEW

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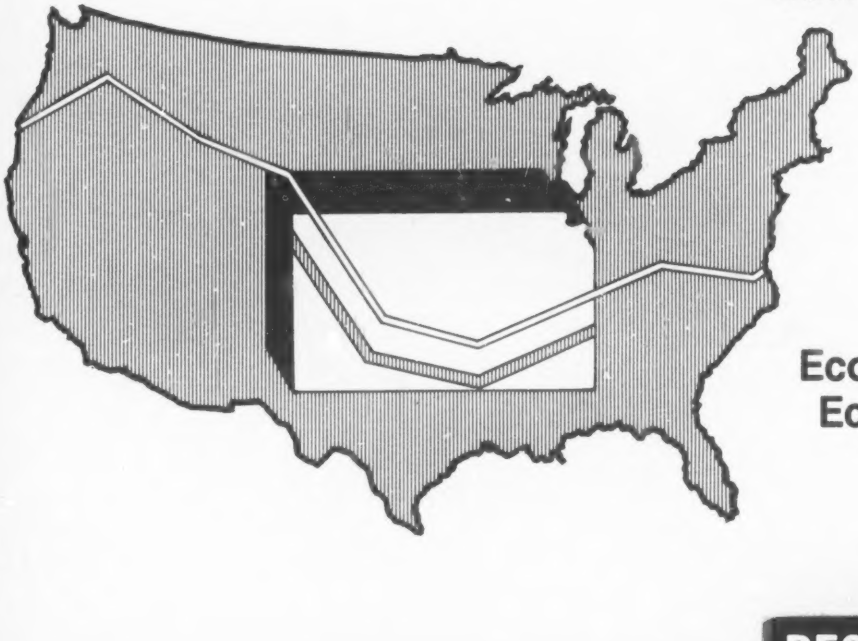

Economic Conditions
Economic Indicators

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Institute for Economic and Business Research, The University of Kansas

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Kansas Business Review (KBR) is published five times a year. *KBR* is published by the Institute for Economic and Business Research, 319 Raymond Nichols Hall, The University of Kansas, Lawrence, Kansas 66045. It is designed by the Division of Publications, Office of University Relations.

Manuscripts for publication in *Kansas Business Review* are solicited from readers and should be sent to the editors for consideration.

Opinions expressed in the articles are those of the author(s) and do not necessarily reflect those of The University of Kansas.

Notice of Change in Publication Schedule

This expanded issue of *Kansas Business Review (KBR)* will be the last number in Volume 6. Due to budgetary constraints and cutbacks, funding for *KBR* is presently exhausted.

Provisional plans at this time call for the resumption of the full publication schedule with the September-October, Vol. 7, no. 1 issue in the fall. Presently, the editors and staff do not anticipate a repeat of an abbreviated schedule next year, but, if necessary due to further financial exigencies, notice will be given in the series' last issue.

CALL FOR PAPERS

The purpose of *Kansas Business Review* is to provide a forum for the dissemination of research studies and reports in the field of economics and business that would be of special interest and relevance to business persons, public officials, and academicians in Kansas and the Plains Region.

The Editorial Review Board welcomes original manuscripts, studies, and research notes from academicians and other persons in any area of economics, business, and business administration. All submissions will be reviewed initially by the editorial staff and, when judged appropriate, will be sent to referees who are knowledgeable about the content.

Manuscripts for consideration should be typed, double-spaced, and submitted in triplicate. In general, length should not exceed 3,000 words. Authors are reminded of the combined scholarly/practitioner orientation of *Kansas Business Review,* which necessitates the contents being in a form readable by that audience. Accordingly, complex statistical material—when necessary for inclusion—should be included in appendix form.

Submit manuscripts to: Editor, *Kansas Business Review,* The Institute for Economic and Business Research, 319 Raymond Nichols Hall, The University of Kansas, Lawrence, Kansas 66045.

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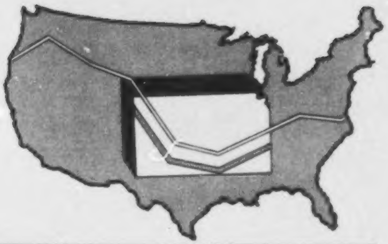
Instability in the Kansas Economy



Kansas' historical tendency to be recession proof may, in many cases, have been the result of a fortuitous combination of events rather than the effect of an inherently stable economy.

Richard Sexton
Robert Glass

Richard Sexton is a Research Economist with the Institute for Economic and Business Research. Robert Glass is an Institute Research Assistant. They acknowledge the contributions of Chris Rott and Nancy Johnson, Research Assistants with the Institute.

Introduction

In his 1981 study (*Kansas Business Review*, Vol. 4, no. 7), John Cita established that the Kansas economy was "relatively recession proof." By this terminology, he meant that Kansas tends to be less prone than the nation as a whole to cyclical fluctuations in nonfarm income over the course of a business cycle. In support of his findings, Cita cited a ranking based on U.S. Commerce Department data which listed Kansas 33rd among the 50 states in terms of vulnerability to cyclical fluctuations.

In his article, Cita also examined the reasons why Kansas has tended to be more stable than the average. His findings suggested that the explanation lay in the state's comparatively small manufacturing sector and in the types of industries significant to that sector in Kansas. In particular, he noted that, because manufacturing is inclined to be far more susceptible to cyclical instability than other industrial sectors, states with an industrial mix heavily oriented towards manufacturing will likely be more vulnerable to recessionary periods. Noting as well that, within manufacturing, durable goods production tends to be particularly volatile, Cita proposed that the fact that Kansas durable goods industries employ only about 12 percent of the work force provides a further explanation of the state's historic stability.

Cita isolated the Wichita area with its manufacturing-dominated economy as the source of much of Kansas' cyclical instability. Within Wichita, he identified aircraft production, a durable goods industry, as a particular source of instability. Another source of volatility in the state pinpointed by Cita was the auto industry, important principally in the Kansas City area.

Also significant is Cita's speculation that, due to the dependence of the Kansas economy on agriculture and the aircraft industry, both of which rely heavily upon international export markets, the state's economic health is tied more closely to international developments than to matters relating to the national business cycle.

The purpose of this article is to extend Cita's work in several areas. In particular, the impact of the state's unstable industries—aircraft, agriculture, and automobiles—on local and statewide economies is examined over each of the most recent national recessions. The study methodology is primarily based upon an analysis of employment and unemployment and a measure of personal income. It will be shown that the examination of these economic indicators can lead to results somewhat different than those attained through an examination of the income measure used in Cita's analysis.

In brief, this study's results verify Cita's identification of the Wichita area as the major source of economic instability in Kansas. In addition, a strong relationship between employment in Wichita and developments in the aircraft industry is established. Furthermore, results are shown which indicate a very significant diffusion of developments in the Wichita economy into the statewide economy. As well, the automotive sector, although a comparatively small employer, is shown to exert a surprisingly strong influence on the economy in the Kansas City, Kansas area.

Agricultural industries are shown to enter the matrix of influence, not through strong effects on employment (because farm-related employment is not great and does not tend to fluctuate cyclically) but, rather, through a very strong impact upon the state's earned personal income.

Examination of these three volatile sectors leads to the interesting conclusion that Kansas' historical tendency to be recession proof may, in many cases, have been the result of a fortuitous combination of events rather than the effect of an inherently stable economy.

The results of the study's analysis are presented as follows: Section I reviews the Kansas economic performance over the past 25 years using an income-based approach. In Section II, economic behavior within the state during the 1970, 1973-75, and 1980-82 recessions is analyzed using an employment-unemployment approach. (Note that in this study the 1980-82 period is treated as a single recession, although officially there were two distinct recessions within that period.) This section's purpose is to identify significant volatility in the nonfarm sector in Kansas and the state's major urban regions, Wichita and Kansas City. Section III presents the results of a simple statistical analysis designed to more rigorously test some of the hypotheses raised in this study and by Cita. Finally, in Section IV, a brief summary and conclusion are presented.

I. A 25-Year Retrospective on the Kansas Economy

The period from the late 1950s to the early 1970s was one of stable growth in Kansas. Since then, however, the pattern of economic growth in the Sunflower State has become far less regular. These trends can be discerned from joint examination of Figures 1 and 2 which trace movements in real earned personal income during the last 25 years. The income measure used in this instance is important. It is the Bureau of Economic Analysis (BEA) personal income statistic, but the series has been deflated to remove the influence of price changes, and transfer payments have been subtracted out; what is left measures only payments received for having supplied productive resources. This series is, perhaps, the best nonemployment-based measure of cyclical sensitivity available at the state or county level. It differs somewhat from Cita's measure which also was based on BEA personal income but which included transfer income and subtracted out farm income. Farm income is often excluded in studies of this nature because it tends to respond to a different set of stimuli than does nonfarm income. For purposes here, however, it is important to leave farm income in, and, shortly, the considerable benefits from doing so will be apparent.

The data in Figures 1 and 2 are annual, so minor quarterly fluctuations are obscured; any irregularity that remains represents only significant cyclical volatility. Figure 1 depicts real earned income in the USA and Kansas for the period 1958-82. Real wage and salary income for Kansas is included as well. This latter measure is designed to capture nonfarm-related income in Kansas, the idea being that farm and farm-related income often accrues to proprietors, e.g., farm owners, small dealers, and jobbers in rural communities, so that this income is excluded from the wage and salary measure. It will be noted that the Kansas figures are magnified 100 times to provide direct comparability with the national aggregate. In so doing, cyclical fluctuations in Kansas are also magnified 100 times, but the magnification does not introduce any distortions on a *proportional* basis. For example, because the Kansas economy is about 1.0 percent of the magnitude of the national economy, a 10 million dollar fluctuation in Kansas income (which appears in the figures as a one billion dollar fluctuation) is proportionally as significant as a one billion dollar fluctuation is at the national level.

Periods of officially designated recessions (at the national level) are indicated by shading in both Figures 1 and 2. The period 1958-72 was marked by three recessions at the national level, although none were particularly severe or long lasting. Kansas, however, grew at a relatively smooth, steady rate throughout this period; that is, it was relatively recession proof. Yet, an examination of real wage and salary income in Kansas over this same period reveals a somewhat different pattern. This measure was flat during the 1957-58 recession but took sharp dips coincident with the national recessions in 1960 and 1970. What clearly happened—as Figure 2 indicates—is that the farm sector propped up the rest of Kansas' economy in the latter two instances. Figure 2 depicts real receipts from beef and wheat in Kansas. (Earned personal income is also included to provide reference.) Together, these two agricultural commodities account for the bulk of Kansas farm income—about 70-75 percent during most of the twentieth century (see Sexton and Cita, *Kansas Business Review*, Vol. 5, no. 6, 1982 for more details). This fact is significant because, among farm commodities, wheat and beef prices are particularly subject to irregular fluctuations which, in turn, induce considerable volatility into income generated from their production[1] (in contrast to, for example, a commodity such as dairy).

Figure 1
Real Earned Income in Kansas and the USA (1957-1982)

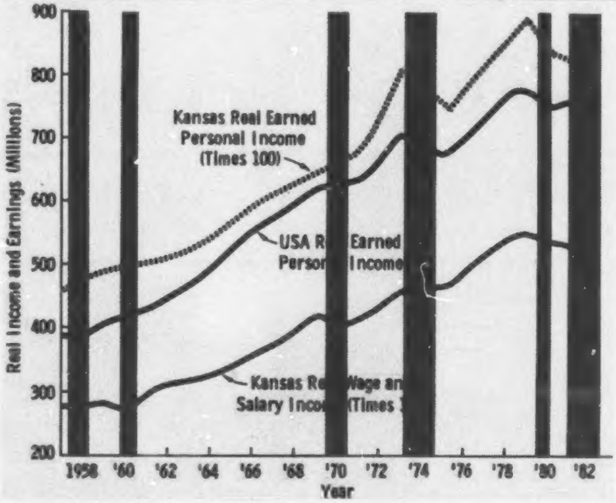
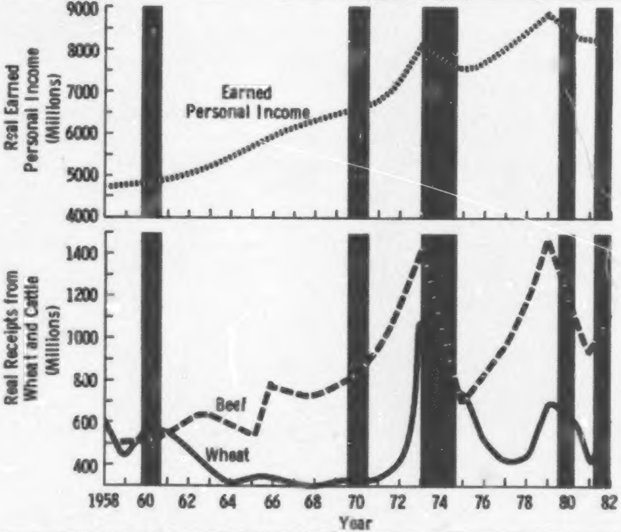


Figure 2
Real Earned Income and Real Beef and Wheat Receipts in Kansas (1958-1982)

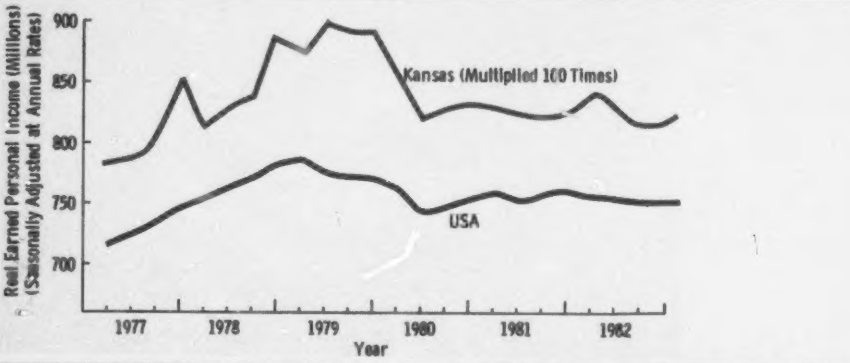


The considerable volatility in wheat and beef earnings is apparent in Figure 2. What is particularly important, however, is that the pattern of fluctuation *happened* to be such that it helped to offset the sharp downturns which hit the nonfarm sector during both the 1960 and 1970 recessions. Specifically, wheat earnings in 1960 reached a peak which they would not again approach for 13 years. In 1970, although wheat receipts had fallen, beef income was in the midst of a strong secular increase, and, consequently, it offset the decline in the nonfarm sector, causing overall Kansas income to continue its upward trend through the recession.

Farm income in Kansas has been declining as a percent of total personal income in the state ever since the percentage reached a modern peak around 25 percent at the end of World War II. By the end of the 1970s, farm income was averaging only 5.0 to 7.0 percent of total Kansas personal income. Examining only the direct influence of the Kansas farm sector, however, belies its importance because farming, like manufacturing, is a primary industry and, as such, is the lifeblood for a number of secondary industries. Therefore, when farm income is down, it exerts a considerable multiplier effect as it becomes manifest initially in farm-related secondary industries and eventually throughout the state economy. In this sense, if one wishes to judge the overall

Figure 3

Real Earned Personal Income in Kansas and USA (1977-1982)



stability of an economy, it does not make sense to exclude farm income because, as with any other primary income source, fluctuations in farm income will magnify themselves as they spread through the economy and will affect tax collections, retail sales, and so forth. Regardless, if one does for some reason wish to exclude farm income, subtracting direct farm income removes only a fraction of the earnings that are tied directly to the farm sector.

Further examination of the data in Figures 1 and 2 for the post-1970 period reveals a sharp contrast to the steady, continuous growth which characterized the pre-1970 period. Earned personal income, propelled by rapid increases in farm income from both wheat and beef, grew at an unusually rapid rate from 1971 to 1973. Then, as the severe 1973-75 recession set in, Kansas earned income turned sharply down. Notably, however, the downturn was due principally to sharp declines after 1973 in wheat and beef earnings; real wage and salary income in Kansas actually rose slightly during the recession.

The decline in Kansas earned income from 1973 to 1975, although steep, largely represented a return to what income would have been had it not risen sharply above trend during 1971-73. Therefore, in contrast to the previous two recessions, the 1973-75 contraction was characterized in Kansas by a declining farm sector with a fairly strong nonfarm sector tending, this time, to soften the state's overall decline.

Following 1975, Kansas embarked on another period of above-trend-rate growth, sparked by a strong surge in the nonfarm sector, as indicated by growth in real wage and salary income, and by another sharp increase in income from beef. The peak was reached in 1979 with beef, wheat, and the nonfarm sector all attaining local maximums. What has happened since then is not very pleasant and is best depicted in Figure 3, which plots real earned personal income for Kansas and the U.S. using quarterly data. Kansas income peaked in the second quarter of 1979, slightly after the nation peaked. The ensuing downturn, however, was proportionally much steeper in Kansas than in the nation.

The first two quarters of 1980 correspond to the officially designated period of national recession after which the U.S. economy entered a short period of recovery. Kansas, though, did not recover to any significant extent at all. The sharp drop in the state's earned income ended after 1980:II, but it was followed by a period of leveling off rather than by significant growth. As such, the Kansas economy was already in a fragile state when the 1981-82 recession began in July.

Figures 1 and 2 also provide an explanation of the latest recession's unusual severity in Kansas. Quite clearly, the nonfarm sector lapsed into a period of decline as did the state's significant farm sectors. The result was a sharp decline in earned income which moved this measure well below its long-term trend and, of course, manifested itself particularly in the form of a sharp decline in state tax revenues.

In essence, what Figures 1, 2, and 3 show is that Kansas does have a number of unstable elements in its economy. Important among these is the farm sector, and its exclusion from business-cycle studies may be a mistake. As evidenced in Figure 1, the nonfarm sector also has exhibited a certain amount of volatility in the past 25 years, which, with one exception, has closely mirrored events in the national business cycle. What happened, however, in the three most recent recessions prior to 1980 was that the state's unstable sectors tended to offset each other, causing Kansas to remain relatively stable compared to the nation and tending to enhance its recession-proof image. In 1980-82, when both the farm and nonfarm sectors turned down, the recession's impact on a proportional basis was greater in Kansas than for the nation.

The critical question is whether the offsetting influences in the recent past were the product of good fortune or were due to an inherent balance in the economy. In other words, is there any sound reason to expect similar offsets to occur in the future? The answer is one which must be deferred until the subsequent evaluation of instability within the nonfarm sector is complete. Because the remainder of this paper concentrates primarily upon this topic, it is appropriate to close this section with a brief discussion of the reasons for volatility within the farm sector and, in particular, in the wheat and beef markets.

In general, productivity advances in American agriculture have caused growth in farm production to outpace the long-term increase in domestic demand. As a result, demand for a number of farm commodities is becoming increasingly dependent upon export markets. These markets, though, tend to be much less reliable sources of demand than are domestic markets, being dependent upon, in great part, political circumstances and harvest conditions in the importing country. Therefore, for commodities such as wheat for which a major proportion of the supply must be exported, an element of rising volatility is introduced into the demand matrix. This, in turn, is reflected in the form of significant price swings. Table 1 provides data on the magnitude of wheat and wheat products exports over the last 15 years. For most years, the proportion of production exported ranges from one-half to two-thirds. However, the significant volatility in the export sector manifests itself in the form of major year-to-year shifts in the export proportion.

Supply-side volatility for wheat is also important. Variations in supply of any single producing region, even an important one like Kansas, do little to influence price, but, of course, they do have a significant impact upon income in the producing region. The source of supply-side variability is principally weather conditions which affect both the acreage harvested and the yield per acre. Table 2, which provides price and output data for wheat in Kansas over the past 10 years, is sufficient testimonial to the recent volatility in wheat receipts. Per-acre yields have varied from 25 to 38 bushels over this period, price has fluctuated in excess of $2.00 per bushel between single years, and year-to-year differences in receipts have ranged as high as 900 million dollars.

On the other hand, the domestic business cycle has a strong influence on beef demand because most U.S. beef is consumed in this country and because the level of consumers' income exerts a significant effect on their consumption of beef. In the economics lex-

Table 1
Value of Wheat Production and Wheat Related Exports for U.S.: 1966-1980

	Value of Production (Billions)	Total Exports Wheat and Products	Percentage Exported
1966	2,129.9	1,431.0	67.2
1967	2,090.1	1,341.3	64.2
1968	1,929.1	1,305.8	67.7
1969	1,795.7	923.6	51.4
1970	1,802.3	965.5	53.6
1971	2,166.7	1,225.9	56.6
1972	2,704.1	1,071.0	39.6
1973	6,744.6	2,387.0	35.4
1974	7,287.3	4,737.6	65.0
1975	7,549.8	5,000.9	66.2
1976	5,867.8	4,803.4	81.9
1977	4,764.6	2,825.4	59.3
1978	5,280.6	3,876.5	73.4
1979	8,070.4	4,577.6	56.7
1980	9,396.7	6,632.6	70.6

Table 2
Farm Value of Wheat Production: 1972-1982

	Acres Sown (Thousands)	Acres Harvested (Thousands)	Yield (Bu.)	Production (Thou. Bu.)	Price (Per Bu.)	Farm Value (Thousands)
1972	10,300	9,400	33.5	314,900	$1.68	$ 529,032
1973	10,800	10,400	37.0	384,800	3.75	1,443,000
1974	12,000	11,600	27.5	319,000	3.86	1,231,340
1975	12,800	12,100	29.0	350,000	3.42	1,200,078
1976	12,900	11,300	30.0	339,000	2.59	818,010
1977	13,200	12,100	28.5	344,850	2.24	772,464
1978	11,300	10,000	30.0	300,000	2.89	867,000
1979	12,100	10,800	38.0	414,400	3.72	1,587,600
1980	13,000	12,000	35.0	420,000	3.78	1,587,600
1981	14,000	12,200	25.0	305,000	3.75	1,143,750
1982	14,000	13,200	35.0	462,000	3.35[1]	1,547,000[1]

[1] Estimate.

icon, demand for beef is quite income elastic. On the supply side, beef production appears to have a cycle of its own which on average, takes about 14 years to complete. Examination of the beef production data for Kansas in Table 3 reveals relative stability in year-to-year production with supply trending upward over time. Major volatility becomes apparent when examining the cash receipts column, particularly since 1970. From 1970-80, fluctuations in receipts ranging from three hundred to five hundred million dollars are common.

II. An Employment-Oriented Perspective on the Kansas Economy in Recent Recessions

BACKGROUND

In this section, the performance of the Kansas economy over the three most recent recessions is examined in a more detailed but nontechnical manner. The focus is on employment and unemployment, an ideal way to analyze specifically the state's nonfarm sector. In his study, Cita identified manufacturing within the nonfarm sector as the component most subject to volatility. Within manufacturing in Kansas, the two most significant subsectors are transportation equipment and nonelectrical machinery.

Further data on aspects of employment within Kansas are contained in Table 4 which includes information for the state and its two major urban centers, the Wichita SMSA and the Kansas portion of the Kansas City SMSA (KCK SMSA). The data illustrate the importance of the transportation equipment industry, particularly aircraft production, in Wichita. Much of the analysis in this section concentrates on the relationship between this particularly volatile industry and the overall Wichita economy and on the diffusion of this relationship throughout the state.

Aside from aircraft production, the remainder of the transportation equipment industry in Kansas is composed mainly of automotive manufacturing. As Table 4 indicates, the bulk of this activity is located in the Kansas City area. Although considerably smaller than the aircraft industry, autos also qualify as an important primary industry and one known to exhibit significant cyclical fluctuation. For these reasons, the relationship between activity in the auto industry and the economic well-being of the KCK SMSA is also examined in the forthcoming analysis. The methodology used is to examine, in turn,

Table 3
Beef Production in Kansas and Beef-Related Earnings: 1957-80

	Quantity Produced Million Lbs. (Live Wt.)	Millions ($) Value of Production	Millions ($) Cash Receipts from Sales of Cattle, Calves, Beef & Veal[1]
1957	1,177.6	198.7	240.4
1958	1,324.5	292.6	380.5
1959	1,560.2	350.8	456.8
1960	1,467.9	299.9	442.5
1961	1,663.9	345.2	497.9
1962	1,721.4	372.6	536.6
1963	1,961.7	397.0	580.9
1964	2,189.5	389.9	559.8
1965	1,826.0	360.3	522.0
1966	2,178.8	490.8	756.2
1967	2,306.6	512.6	734.2
1968	2,321.0	540.9	799.8
1969	2,350.4	616.1	871.7
1970	2,483.3	693.2	952.5
1971	2,811.0	834.3	1,220.0
1972	2,974.2	1,040.6	1,575.3
1973	2,924.1	1,300.8	2,034.5
1974	2,740.0	941.1	1,417.4
1975	2,384.0	711.9	1,102.1
1976	2,630.1	904.5	1,476.3
1977	2,790.2	975.3	1,794.6
1978	2,668.5	1,397.0	2,418.3
1979	2,532.6	1,779.6	2,992.8
1980	2,766.0	1,811.9	2,836.0

[1] Includes receipts from marketings and sales of farm-slaughtered meat.

Table 4
Aspects of Employment in Kansas

	Kansas	Kansas City SMSA (Kansas Portion)[a]	Wichita SMSA[b]
1980 Population	2,363,679	442,604	411,313
1980 Employment[c]			
Total	763,326	168,143	198,037
Manufacturing	207,202	43,304	70,915
Percent Mfg.	27.1%	25.8%	35.8%
Transportation Equipment:	54,425	e	43,249
Aircraft and Parts	44,842	f	43,019
Motor Vehicles and Equipment	8,336	e	d
Machinery Except Electrical	32,190	2,934	7,925

[a] Includes Johnson and Wyandotte counties.
[b] Includes Butler and Sedgwick counties.
[c] Data are specifically for the week of March 12.
[d] 100-249 (specific data not disclosed).
[e] 5,000-9,999 (specific data not disclosed).
[f] No employment or else very insignificant levels.

the periods covering each of the three national recessions since 1970 with respect to the variables outlined above.

THE 1970 RECESSION

Following a decade of sustained growth, the nation's economy turned downward in 1970 into a comparatively mild one-year recession. ("The National Review" in this *KBR* provides more details on the direct effects of recent recessions at the national level.) As noted in Section I, the nonfarm sector in Kansas took a sharp dip roughly in tandem with the national recession, and Figure 4 provides a clear depiction of this fact. It illustrates seasonally-adjusted unemployment rates[2] for the U.S., Kansas, and its major SMSAs over a time period around the recession (with the shaded interval denoting the recession itself).

From Figure 4, it is apparent that the Kansas and U.S. unemployment rates reacted in an approximately parallel fashion over this period. During the recession itself, however, the state's rate of unemployment edged above that at the national level, suggesting that, based upon this indicator, the recession apparently hit Kansas comparatively harder than the nation as a whole. The reason is not hard to discern. Figure 4 shows that adjusted unemployment in Wichita rose sharply (over six points) during the recession.

The cause of Wichita's malaise is revealed in Figure 5 which depicts total employment (not seasonally adjusted) in Kansas, Wichita, and in the Wichita aircraft industry. Aircraft had begun a period of moderate decline in 1968 (perhaps reflective of a winding down of the Vietnam War effort) which accelerated coincidental to the onset of the recession at the national level. Given its role as a primary industry, the recession in the aircraft industry would be expected to exercise a strong negative effect on the entire Wichita economy, which, as Figure 5 indicates, is precisely what happened. Total employment in Wichita turned sharply downward at the start of the national recession and did not begin to recover until a turnaround in the aircraft industry was initiated in the spring of 1971. Also important to note is how closely employment in the state followed the developments in Wichita, suggesting significant diffusion of activity in the Wichita area through the rest of the state. This relationship will be examined once again over the 1973-75 and 1980-82 recessions and will be analyzed more precisely in Section III.

In Figure 4, unemployment in the KCK SMSA also rose coincidentally with the onset of the national recession. The impact was not nearly so severe, however, as in Wichita. Figure 6 provides a clearer indication of this fact and also illustrates a fairly strong relationship between activity in the auto industry and unemployment in the KCK SMSA.

The reasons for this relationship are not completely clear. As a percent of total employment, the auto industry in the KCK SMSA is quite small. Yet, because it is a significant primary industry, it is not unrealistic to expect it to project substantial multiplier effects. On the other hand, because the activity in the U.S. auto industry so closely "patterns" developments in the national business cycle, it is possible that the relationship is made to look stronger than it actually is due to general business-cycle effects. Regardless of the explanation, this relationship will be shown to hold over the next recessions as well.

THE 1973-75 RECESSION

The economy turned sharply downward in the second half of 1973 due to a number of reasons. Principal among them were skyrocketing energy prices caused by the oil embargo and a restrictive monetary policy which, in the face of rising inflation, fueled significantly higher interest rates. The recession, which lasted 16 months from peak to trough, was the most severe since the Great Depression.

Figures 1 and 2 indicated a substantial decline in Kansas earned income over this

Figure 4
Unemployment Rates for USA and Kansas (1969-1971)

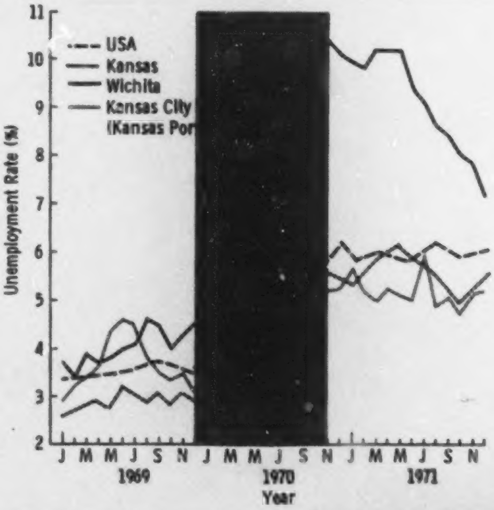


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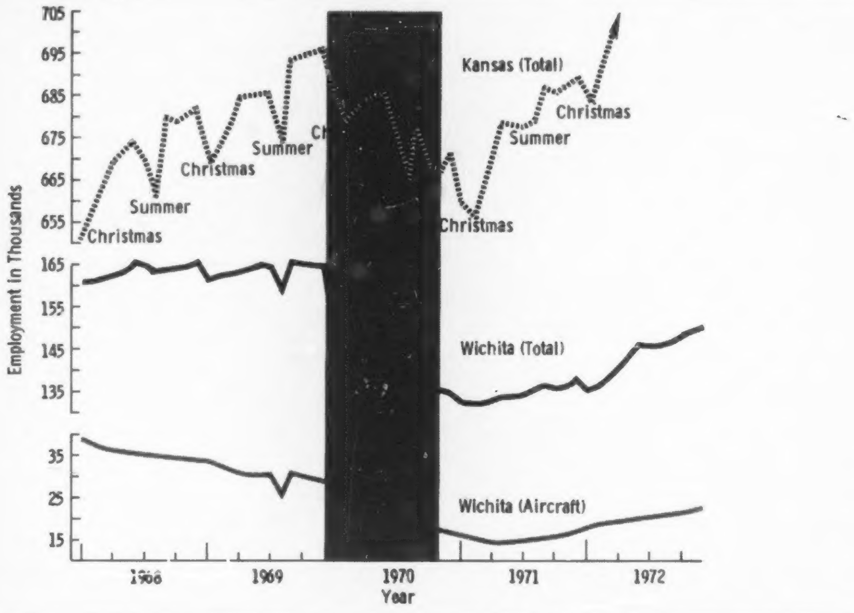
Figure 5

Employment for Kansas, Wichita, and the Wichita Aircraft Industry (1968-1972)



recession. But recall that much of the drop seemed due to a downturn in agriculture and that the nonfarm sector had appeared to perform quite well during this period. Figure 7, which is analogous to Figure 4, verifies that this indeed was the case. Although adjusted Kansas unemployment rose over the period of the recession, the pattern of increase was irregular, and the peak to trough rise was less than 2.0 percent as compared to a rise of over 4.0 percent at the national level. In contrast to the previous recession, the KCK SMSA turned down more sharply relative to the Wichita area. Figures 8 and 9 provide the explanation for this turnabout.

Figure 8, analogous to Figure 5, shows that Wichita aircraft employment held up remarkably well during the recession; in fact, it actually increased from peak to trough. Aircraft's strength carried through, as Figure 8 indicates, to the entire Wichita economy and to the state as well. The strong showing of aircraft during this period can be related to a conclusion reached by Cita as part of his study—namely, that the health of the aircraft industry, due to its export orientation, may be more dependent upon international developments than on the domestic business cycle. Although results in the next section cast doubt on the general validity of this statement, it is true that the 1973 period marked the beginnings of a significant transfer of wealth from industrialized economies to energy exporting nations. Therefore, although the U.S. was mired in recession, Wichita was bouyed by strong international buying power throughout the period.

The KCK SMSA was not as fortunate, however, as Figure 9 illustrates. Unemployment rose nearly three percentage points from peak to trough and once again followed a very tight inverse relation with variation in U.S. auto output during that period.

THE 1980-1982 RECESSION

When the economy peaked again in January 1980, Kansas stood in a very favorable position relative to the nation as a whole. Its unemployment rate, at about 3.0 percent, was less than half the greater than 6.0 percent rate prevailing for the entire nation. As Figures

Figure 6

Comparison of USA Auto Output to Kansas City Unemployment (1969-1971)

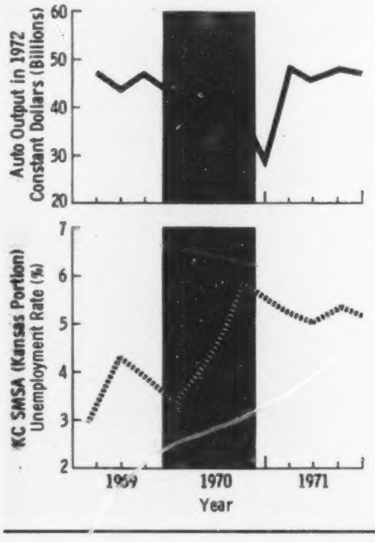


Figure 7

Unemployment Rates for USA and Kansas (1973-1975)

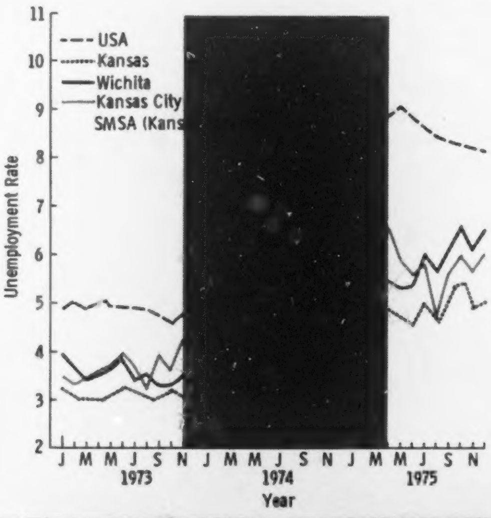


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Figure 8
Employment for Kansas, Wichita, and the Wichita Aircraft Industry (1973-1975)

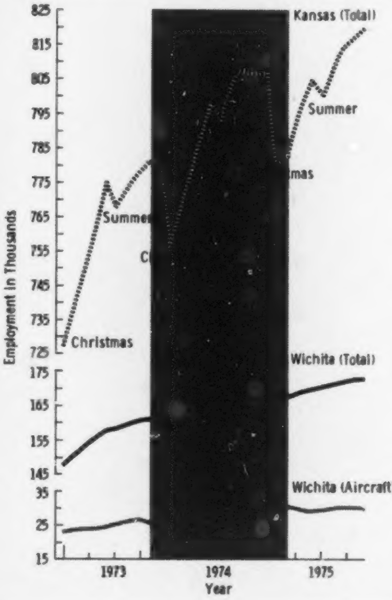
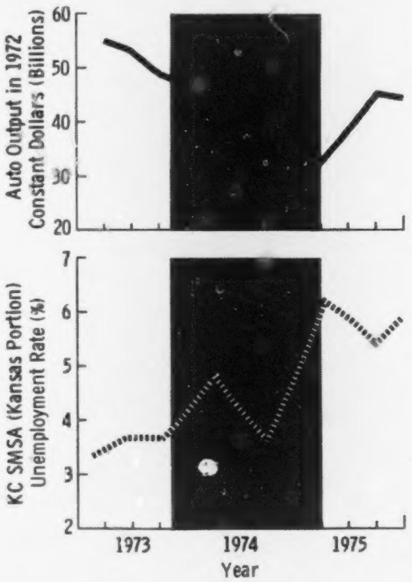


Figure 9
Comparison of USA Auto Output to Kansas City Unemployment (1973-1975)



1 and 2 indicated, the state had just completed several consecutive years of continuous growth. Thus, it was from a position of strength that Kansas entered the recession.

The recession's first salvo lasted through July of 1980. Figure 10 shows that, nationally, unemployment quickly jumped two points from about 6.0 percent to 8.0 percent over these six months. Kansas' unemployment rate and that of its two major urban centers were closely bunched during this time, and all rose about one percentage point during the initial recessionary phase.

Following about a year of anemic, uneventful recovery, the nation's economy turned down again in July 1981. Due to the effects of the year-earlier recession, however, this time the national economy and the key economies in Kansas entered the downturn with unemployment at higher levels and, in general, stood in considerably weaker positions than those from which they had faced the 1980 slump. Because of this weakened posture, unemployment moved up quickly nationally and in Kansas as well. Wichita unemployment, in particular, rose sharply to the point where it nearly reached the national level

Figure 10
Unemployment Rates for USA and Kansas (1980-Jan. 1983)

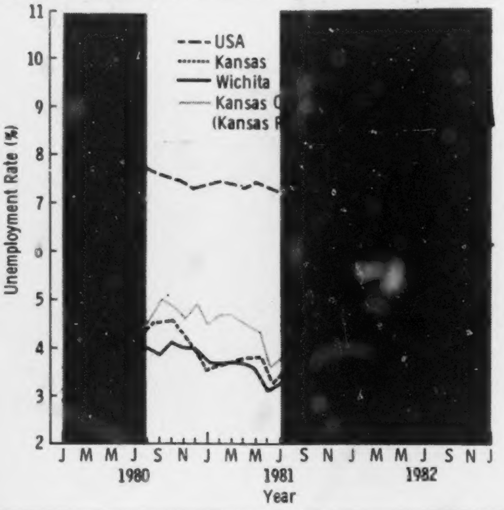
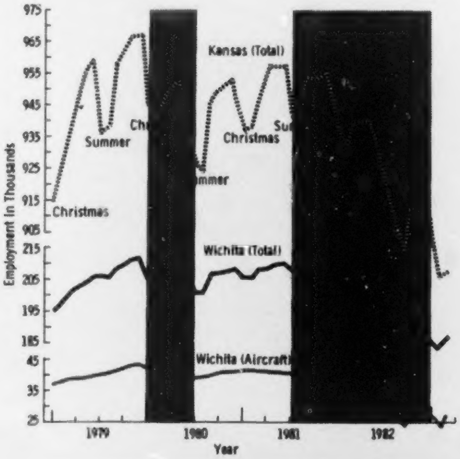


Figure 11
Employment for Kansas, Wichita, and the Wichita Aircraft Industry (1979-Feb. 1983)



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before falling off sharply in recent months.

Figure 11 provides the details on the Wichita dilemma. It shows aircraft employment beginning to fall moderately at the start of 1980, coincidental with the onset of the recession nationally, and, as before, the effect was to pull total Wichita employment as well as Kansas employment down. Aircraft employment leveled during the year of recovery but did not improve noticeably. Then, in mid-1981, it once again declined sharply, and, predictably, Wichita and the state followed in lockstep.

Figure 10 suggests that seasonally-adjusted unemployment declined in Kansas and Wichita beginning in the fourth quarter of 1982 and extending into the early months of 1983. The data in Figure 11, however, do not indicate any rise in *employment* over this period. In fact, based upon total employment data seasonally adjusted by the KU Institute for Economic and Business Research, it appears that, during the three years from the start of 1980 to the end of 1982, total employment in Kansas declined about 46,000, with employment in Wichita alone dropping in the vicinity of 16,500 workers. Furthermore, through the end of 1982, the data do not indicate any recovery trends.

The KCK SMSA fared much better by comparison. Although once again, as Figure 12 shows, the level of its unemployment rate has been closely attuned to output of the auto industry. Even in spite of the depths of the recession in autos, however, adjusted unemployment in the KCK SMSA has remained below 6.0 percent—an apparent testimonial to its diversified service- and retail-oriented economy.

PERSPECTIVES AND INFERENCES

A number of tentative observations can be made at this point:

1. Based upon the BEA analysis cited in John Cita's study, historically Kansas has been relatively recession proof. However, this study has identified agriculture, aircraft production, and automobile manufacturing as significant, unstable, primary industries in Kansas. Omission of farm income from the BEA analysis may have biased the Kansas results, making the state's economy appear to be more stable than it actually is.

2. Inclusion of the farm sector into the analysis leads to the interesting conclusion that Kansas' relative stability over recent recessions is somewhat misleading. Specifically, the state's comparative calm appears to have been the consequence of the instability in farm receipts and in aircraft production offsetting each other. During 1980-1982, when they turned down together, the result was a major slump in the state's economy.

3. From a timing perspective, movements in the Kansas economy, particularly in the nonfarm sector, have tended to closely parallel the pattern of the national business cycle. No evidence exists to suggest that Kansas either leads or lags the nation in terms of impact.

4. Due to the nature of the farm sector in Kansas, looking only at employment-unemployment or income-based measures can be misleading. Volatility in the farm sector will be reflected primarily in income measures because farm and farm-related employment is small and inherently stable. Instability in the nonfarm sector will be reflected in both income and employment, with the employment effects in Wichita's aircraft industry being particularly important.

This observation is borne out quite vividly in Figures 13 and 14 which, respectively, depict employment in the Wichita aircraft and parts industry and total nonfarm employment in Wichita minus aircraft and parts employment. Figure 13 vivifies the volatility which has characterized the Wichita aircraft industry. For example, employment fell from nearly 40,000 to near 14,000 over the period from late 1966 to mid-1971. Once aircraft-related employment is netted out, however, the Wichita employment situation becomes much more tranquil, exhibiting, as Figure 14 indicates, a long-run growth trend and only minor cyclical swings.

This section concludes by returning to the important question raised earlier: Is there sound basis upon which to expect that the volatile economic sectors in Kansas will continue their tendency to offset as they have done in the past? Providing the answer to this question calls for a brief re-examination of the three major unstable economic sectors in Kansas.

Automobile production and auto industry employment closely mirror the national business cycle. This reflection is the result of the auto's status as a "big-ticket item," one for which purchases can usually be deferred during periods of falling income or rising interest rates. Developments in the automotive sector were shown to exert a strong influence on unemployment in the KCK SMSA. However, its importance to the Kansas City area has fallen in recent years in response to the general decline in domestic auto output. Its future significance depends upon a long-term revival of the auto industry. To the extent that it remains important, the auto industry in Kansas City provides a close tie between the national business cycle and the Kansas economy.

Agriculture relies heavily on export markets as does the aircraft industry to an extent. The determinants of export demand for the two sectors, however, are dissimilar. Agricultural exports for Kansas, wheat in particular, depend upon international harvest conditions more than on measures of international buying power which affect demand for aircrafts and related components. Political relationships and the ability to execute trade agreements are, of course, important in either case.

Domestically, demand for most agricultural products is quite stable. Beef, as noted, is an

Figure 12

Comparison of USA Auto Output to Kansas City Unemployment (1979-1982)

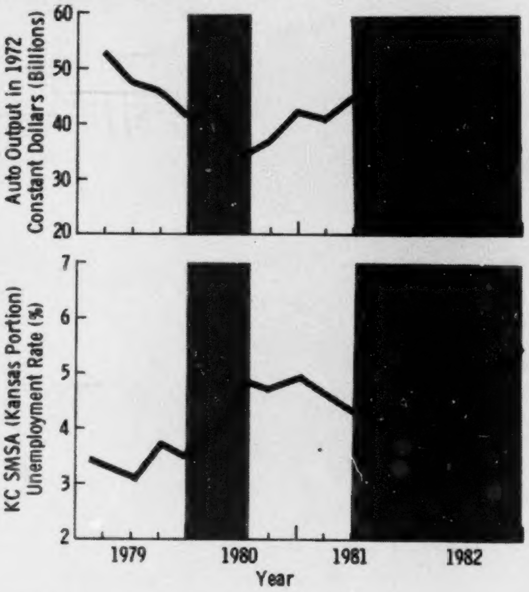

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Figure 13

Employment in the Aircraft and Parts Industry, Wichita SMSA (1960-Feb. 1983)

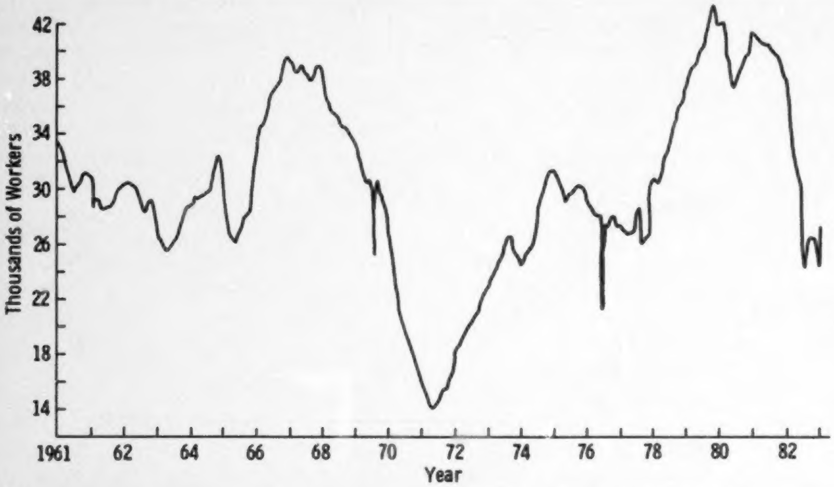
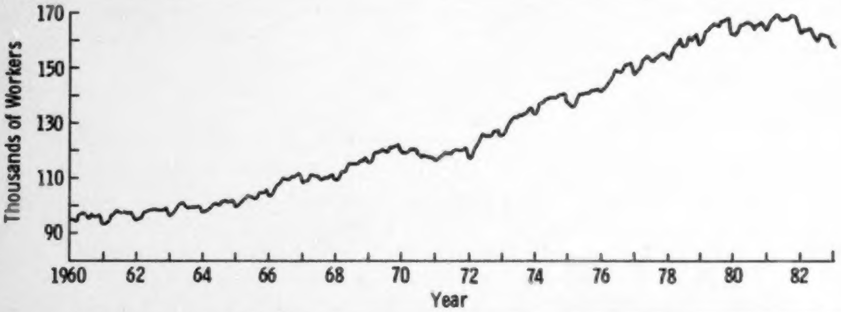


Figure 14

Total Wichita Non-Farm Wage and Salary Employment Minus Employment in the Aircraft and Parts Industry (1960-Feb. 1983)



exception due to its responsiveness to income changes over the business cycle. Because aircraft also constitutes a durable commodity not unlike autos, domestic demand for production from the Wichita aircraft industry is strongly influenced by the domestic business cycle. An additional source of demand-side instability is the state of the military budget and the extent to which the U.S. becomes involved in any military action.

As such, it is apparent that Kansas' important primary industries are not closely related in respect to demand-side volatility. Rather, each appears to respond to a relatively independent set of demand factors. Not to be forgotten either is supply-side volatility for agriculture, particularly wheat, which also varies independently of the other factors discussed.

What this complex of influences means is that elements of the economic instability in Kansas, namely autos, beef, and the domestic component of aircraft demand, are geared around the national business cycle. Yet, any of a number of exogenous influences—agricultural supply variability, various international factors, and the military situation—may act to reinforce or to counteract the basic cyclical tendency. The perspective here is that these events are largely independent of each other and the domestic business cycle as well. Therefore, they cannot be counted on to offset the business cycle, nor can they be expected to consistently exacerbate it.

III. A Closer Examination of Employment Determinants in Kansas

BACKGROUND

The graphical analysis in the preceding sections is an excellent way to uncover and describe significant trends and relationships. The technique is limited, however, in that only a small number of relationships can be examined at one time. Therefore, this section presents the preliminary results of an attempt to analyze employment relationships in Kansas through a simple statistical model. More specifically, the previous analysis established a number of tentative hypotheses to be examined further in this section:

1. The aircraft industry represents the major source of employment volatility in Wichita and Kansas.

2. Primarily as a consequence of the aircraft industry, developments in Wichita diffuse quickly and significantly to the state level.

3. The health of the nonfarm sector in Kansas is tied closely to developments in the national business cycle, perhaps more closely than has commonly been believed.

4. No evidence exists to suggest that Kansas either leads or lags developments in the national business cycle.

METHODOLOGY

Simple statistical models were developed to examine these hypotheses empirically. Based upon the discussion in Sections I and II, Wichita nonfarm employment was postulated to be a function of demand for aircraft output and business-cycle factors. Similarly, Kansas nonfarm employment was postulated to be a function of demand for aircraft output and business-cycle factors or, alternatively, a function of Wichita nonfarm employment and business-cycle factors.

To examine these relationships, monthly data were obtained from 1960-1982 for Kansas nonfarm employment and Wichita nonfarm employment. The monthly dollar value of national aircraft shipments was chosen as an instrument for aircraft demand. These data were all deseasonalized, and the aircraft shipments series was deflated as well.

National business-cycle factors were represented by the monthly value of the Commerce Department's Index of Four Coincidental Indicators. The series included in this Index are number of employees on nonagricultural payrolls, real personal income less transfer payments, total industrial production, and real manufacturing and trade sales. This measure has accurately approximated the actual business cycle during recent recessions (see, in this regard, the graphical depiction of this series on the inside back covers of *KBR*).

Prior to actually fitting equations to the data, the individual relationships were examined in some detail in order to suggest the appropriate specifications of the general functional forms established above. This analysis revealed a very tight direct relationship between deseasonalized Kansas nonfarm employment (K) and deseasonalized Wichita nonfarm employment (W). The overall correlation between the two measures was 0.979 (1.0 denoting perfect positive correlation), and the pattern was precise over the entire period of observation except for the 1967-71 period during which time W declined by 18,000 workers while K continued to increase except during the 1970 recession. The reason for this discrepancy appears to have been a Vietnam War-related decline in the aircraft industry which was offset at the state level by strength in several other sectors including beef, autos (total automotive employment grew by about 2,000 over this period), retailing, and services. These factors are reflective of the general good health of the economy during this period as embodied in the form of a close, direct relationship between K and the Index of Coincidental Indicators (I). The overall correlation between these two measures, 0.960, was also very high, tending to confirm the hypothesis that Kansas employment is closely tied to the national business cycle.

A close correlation between the deseasonalized value of aircraft shipments (A) and K and W was also revealed. The relationship was not particularly precise, however, due to considerable irregular fluctuation in A even after deseasonalizing. This led to reconstruction of the A variable into a three-month centered moving average of the monthly observations to affect some smoothing,[3] i.e., $\bar{A}_i = (A_{i-1} + A_i + A_{i+1})/3$. This modification improved the fit, raising the correlation coefficient between $\bar{A}$ and K and W to 0.77 and 0.79, respectively.

To test the conjecture that developments in the aircraft industry or in the national business cycle might have either an early or delayed impact upon Kansas and Wichita, the fit between K and W and a number of possible leads and lags for the variables I and A was examined. In no instance did leading or lagging variables produce a better fit than that obtained using contemporaneous variables. This failure to produce a better fit tended to confirm the earlier hypothesis that, indeed, the relationship was contemporaneous, and, therefore, no additional analysis with leads or lags was undertaken.

Not surprisingly, a linear trend variable (T) also produced a close relationship with K and W. This relationship is common in economic time series analysis and is a reflection of the tendency for variables which measure economic activity to increase gradually over time. The correlation matrix in Table 5 summarizes the statistical relationship between each of the key variables in the analysis.

Examination of the data did not reveal any significant nonlinear patterns among the variables. Therefore, only linear relationships were investigated. Also, an argument developed in this study has been that economic activity in the Wichita area impacts upon the state, but not vice-versa, i.e., causation is from Wichita to the state. The reasoning behind this assertion is that Wichita's economy is dependent more upon national and international developments than upon the local situation. The statistical importance of this argument is that it eliminates simultaneity problems and permits single equation estimation.

RESULTS

The general linear models estimated were:

$$W_t = \alpha + \beta_1 \bar{A}_t + \beta_2 I_t + \beta_3 T_t + \epsilon_{1t}, \qquad (1)$$

and

$$K_t = a_o + b_1 W_t + b_2 I_t + b_3 T_t + \epsilon_{2t}. \qquad (2)$$

An alternative specification for (2) was:

$$K_t = a_1 + B_1 \bar{A}_t + B_2 I_t + B_3 T_t + \epsilon_{3t}. \qquad (3)$$

Full definitions for all variables are given in Table 5.

A common problem with economic time series analysis is high levels of multicollinearity among the independent variables.[4] Data in the correlation matrix in Table 5 suggest high levels of collinearity among these data as well. Therefore, to reduce multicollinearity problems, equations (1), (2), and (3) were also estimated excluding the trend variable.

Results of ordinary least squares estimation are contained in Table 6. A good fit as measured by the value-adjusted R^2 is attained in all cases.[5] However, the value of the coefficients fluctuates widely in some cases between models for which a trend is included versus those for which it is omitted. Imprecision of estimated coefficients is a symptom of multicollinearity, and omission of the trend may introduce a specification error, so this problem is not unexpected. Nevertheless, interpretation is made difficult by this problem.

The model in equation (2) is the best performer. Aside from having an exceptionally good fit, the coefficients are all of the correct sign and do not change drastically due to the inclusion or omission of T. The coefficient on W, Wichita employment, is 2.45 when T is included and 3.06 when it is omitted. These results suggest that an employment change in Wichita multiplies about 2.5-3.0 times as the impact spreads through the state. For example, translated into percentage terms, a 10.0 percent reduction in employment in Wichita can be expected to reduce employment statewide by about 6.0 percent; that is, the elasticity of statewide employment with respect to a change in Wichita employment is about 0.6.

The coefficient on aircraft shipments is consistently of correct sign and does not fluctuate too widely with the inclusion or exclusion of T. For Wichita, the average aircraft shipments coefficient is .045, which suggests that a sustained 100 million dollar change in monthly aircraft shipments can be expected to change Wichita employment in the same direction by about four to five thousand. Based upon an average coefficient on aircraft shipments for Kansas of about 0.07, this effect would be multiplied 1.5-2.0 times as it diffused through the state.

With one exception, the coefficient on the Coincidental Indicators Index variable has the postulated positive sign (i.e., improvements in the national economy would be expected to generate employment increases in Kansas and Wichita). Unfortunately, the magnitude of the sign depends importantly upon whether or not T is included (a product, no doubt, of the strong correlation between the two), and, therefore, exact interpretation of the coefficient is not possible.

Another problem frequently plaguing eco-

Table 5
Correlation Matrix

	Ā	W	K	I	T
Ā	1.00				
W	0.79	1.00			
K	0.77	0.98	1.00		
I	0.83	0.92	0.96	1.00	
T	0.76	0.93	0.98	0.97	1.00

Ā = Three-month centered moving average for national aircraft shipments in millions of dollars.

W = Deseasonalized monthly nonfarm employment in Wichita in thousands.

K = Deseasonalized monthly nonfarm employment in Kansas in thousands.

I = Index of four Coincidental Indicators (1967 = 100).

T = Monthly time trend.

Table 6
Results of Ordinary Least Squares
Estimation of Coefficients in Equations 1, 2, and 3

		Explanatory Variables					
Equations	Dependent Variable	Constant	Ā	I	W	T	Adj R^2
General Model:							
(1)	W	119.32	0.06	−0.17		0.32	0.89
(2)	K	190.96		0.50	2.45	0.73	0.99
(3)	K	452.67	0.05	0.66		1.43	0.96
Reduced Model (T omitted):							
(1)	W	50.44	0.03	0.91			0.84
(2)	K	16.03		2.10	3.06		0.98
(3)	K	143.91	0.09	5.48			0.92

nomic time series analysis is serial correlation of the residuals.[6] This study was no exception in that regard. Based upon an examination of residual plots and Durbin-Watson statistics, positive serial correlation was a serious problem in each of the regression equations discussed above. The consequence of serial correlation is that ordinary least squares estimates are unbiased but not efficient. Standard tests of statistical significance fail as well, which is why no t-statistics or standard errors are presented in Table 6.

An attempt was made to correct the problem through use of a procedure suggested by John Durbin (his contribution is discussed in most econometric texts, e.g., Maddala, 1977, as well as in a brief appendix to this study). Briefly, the procedure involves making an assumption about the serial correlation's functional form and then transforming the data to compensate for the problem. In this particular instance, the transformations were similar (but not identical) to taking first differences for each variable, e.g.,

$K_t' = K_t - K_{t-1}$,
$W_t' = W_t - W_{t-1}$,
$A_t' = A_t - A_{t-1}$, and
$I_t' = I_t - I_{t-1}$.

Although noting once again that these were not the exact transformations used (the interested reader should consult the appendix for specific details), to enhance the intuitive appeal, the subsequent discussion is in terms of first differences. Regression results are contained in Table 7. Prior to their examination, some points should be noted. In particular, the trend variable is necessarily lost during the transformation process because transformation turns it into a vector of constants. Also, the purpose of the transformation is to provide unbiased and efficient estimators of the coefficients in equations (1), (2), and (3). Only the value of the constant is necessarily changed through the transformation. However, because a moving average was used to smooth the aircraft shipments variable in (1) and (3) and because the transformation was made on the raw monthly data (a first difference transformation of a moving average lacks intuitive or logical appeal), the transformations of these equations do not provide precise estimates of the original coefficients. On the other hand, the transformation of equation (2) should provide unbiased, efficient estimates of b_1 and b_2.

The results of these estimations are quite illuminating. Initially noteworthy is that the fit as measured by adjusted R^2 is much poorer in each equation, a usual result when first differences are taken. The overall regressions as measured by the F statistic, however, are statistically significant in each case. Also significant is that Durbin's transformation has removed the serial correlation problem. This fact is reflected in the values of the Durbin-Watson statistic which approach 2.0 in each instance (a Durbin-Watson value of 2.0 denotes no serial correlation).

Results for equations (1) and (3) are quite similar. All coefficients have the correct sign, but the coefficient for aircraft shipments in each instance is very small and not statistically significant. The coefficients for the national business cycle (represented by the Index of Coincidental Indicators) *is* highly significant. These results may be surprising given the close relationship observed earlier between the vitality of the aircraft industry and employment in Wichita and the state. To suggest that the aircraft industry is not important to Wichita or Kansas would, of course, be ridiculous. Rather, what these results suggest is that once the effects of the national business cycle are accounted for, little of the remaining variation in Wichita or Kansas employment is explainable in terms of variation in aircraft shipments. Such a suggestion is not too surprising given that the correlation coefficient between $\bar{A}$ and I is 0.83; that is, aircraft shipments exhibit little variation independent of the national business cycle, or, analogously, the national business cycle becomes reflected in Wichita primarily through the aircraft industry.

Table 7
Results of Least Squares Estimation Using Transformed Variables

		Explanatory Variables						
Equation	Dependent Variable	Constant[a]	A'	I'	W'	Adj R^2	F	D.W.[b]
(1)	W'	114.58	0.0005 (0.38)[c]	0.446 (5.33)[c]		0.09	14.55	1.86
(2)	K'	133.56		2.076 (7.76)[c]	2.387 (11.23)[c]	0.67	278.99	1.79
(3)	K'	477.45	0.0018 (0.33)[c]	0.435 (7.91)[c]		0.18	31.32	1.72

[a] Constant term has been adjusted to correct for the transformation.

[b] Durbin-Watson statistic.

[c] t-statistics are in parentheses. A t-value greater than 1.96 denotes that the estimated coefficient can be considered significantly different from zero with a 95 percent confidence level.

Equation (2) once again performed very well. The coefficients for W' and I' were both of correct sign, and each exhibited a high level of statistical significance. In addition, the magnitude of the coefficients was very similar to those obtained using nontransformed data. In particular, the estimate of b_1 (the coefficient on Wichita employment) is 2.36, further supporting a Wichita-to-Kansas employment multiplier in the range of 2.5.

IV. Summary and Conclusions

The nature of cyclical instability in Kansas and its major metropolitan areas was examined from a number of different perspectives in this study. Cyclical fluctuations in Kansas personal income were examined in Section I. A key conclusion from this section was that volatility in Kansas agriculture has a significant impact on statewide personal income and that its exclusion from earlier studies of the Kansas business cycle likely biased their results.

Examination of employment and unemployment measures in Section II revealed a close relationship between developments in the Wichita aircraft industry and the overall Wichita economy. In addition, a very close correlation between employment in Wichita and employment in the state suggested a significant diffusion of activity from the Wichita area throughout the state. Also, the health of the economy in the Kansas City, Kansas area was shown to be quite closely tied to developments in the automobile industry.

As such, aircraft, agriculture, and automobiles were shown to be three important primary industries in Kansas which exhibit considerable volatility. An important conclusion derived in Section II was that Kansas' tendency to be recession proof has been the result of these unstable sectors tending to offset each other rather than being due to an inherently stable economy. Moreover, it was argued that these sectors fluctuate somewhat independently of each other and cannot be counted upon to continue to generate offsetting patterns of fluctuation. The state's economic infirmity during the 1980-82 period is a vivid example of the consequences when all three volatile sectors turn down together.

Section III represented an attempt to analyze more closely the relationships established in the previous sections. Conclusions from this investigation are presented in terms of the

In contrast to the previous two recessions, the 1973-75 contraction was characterized in Kansas by a declining farm sector with a fairly strong nonfarm sector tending, this time, to soften the state's overall decline.

specific hypotheses enumerated in the opening of that section.

1. The health of the aircraft industry was shown to be quite closely tied to the national business cycle. In fact, when business-cycle effects were accounted for, variability in aircraft shipments was unable to explain changes in Wichita or Kansas employment. This finding tends to contradict the oft-stated assertion that aircraft demand is primarily dependent on international markets. In reality, during a typical year, only about 10 to 20 percent of Wichita aircraft shipments are exported, e.g., in 1980, the figure was 18.3 percent. However, in spite of these low percentages, aircraft is by far the most significant nonagricultural export in Kansas, amounting to 753.2 million dollars in 1980. Moreover, the percentage has jumped considerably higher at times, for example, during the 1973-75 recession. Regardless, based upon this analysis, developments in the domestic business cycle are much more important to the Wichita aircraft industry than has generally been thought.

2. The Wichita area is, as John Cita noted, the source of much of Kansas' cyclical instability. This analysis indicated that employment changes in Wichita are multiplied about 2.5-3.0 times as they diffuse through the state.

3. The Kansas economy is closely tied to developments in the national business cycle, perhaps more so than is commonly realized. This dependence is principally a result of the significant ties between the vitality of the aircraft and auto industries and national economic conditions. This dependence is suggested by correlation coefficients of 0.92 and 0.96 between movements over the past 23 years in the Index of Coincidental Indicators and in levels of employment in Wichita and Kansas, respectively.

4. Also borne out was the hypothesis that the relationship between the Kansas economy and the national business cycle is contemporaneous, i.e., no significant leads or lags were apparent.

In brief, this study has cast some doubts on commonly held beliefs regarding the Kansas economy. Specifically, it appears that the state's economy is tied more closely to the national economy than many thought and that it is not as stable as Kansans might wish to believe. To be sure, so far, the 1980s have not been good for Kansans. Consequently, it would seem that continued critical examination of the state's economic fabric as it is woven from within and without is in order to minimize the chance of the unfortunate events of recent years recurring in the future.

A 10.0 percent reduction in employment in Wichita can be expected to reduce employment statewide by about 6.0 percent.

Footnotes

[1] Also important along these lines is that, due to the nonrelatedness of beef and wheat production, fluctuations in income from beef and wheat production tend to be independent of each other, and one commodity cannot usually be expected to offset an income fluctuation in the other. Contrast this situation to what often prevails between corn and beef. Because corn is a significant input into beef production, high (low) corn prices tend to raise (lower) costs to beef producers and, consequently, lower (raise) income from beef. This relationship results in a degree of built-in stability; that is, when earnings from one commodity are up, receipts from the other may often be down.

[2] The seasonal adjustment aspect is important. Ordinarily, employment and unemployment data at the state level and for subdivisions therein are not seasonally adjusted. This omission can tend to obscure important cyclical fluctuations. See, as an example, Figure 5 which plots raw (not deseasonalized) employment data.

[3] Calculation of a moving average makes economic sense as well. This is a reflection of the fact that employment may not be a function only of current shipments but also of shipments in the immediate past and future.

[4] Multicollinearity arises when one or more independent variables are highly correlated with a linear combination of other independent variables. It is common in economic time series analysis because economic variables often tend to move together over time. The practical implication of a multicollinearity problem is that it is difficult to disentangle the joint impacts of the independent variables. As a result, coefficient estimates are often imprecise, may be of incorrect sign, and tend to lack statistical significance.

[5] Adjusted R^2 measures the proportion of variance in the dependent variable which is explained by the estimated equation. A value of 1.0 would denote a perfect fit, whereas values close to zero indicate a poor fit, i.e., the regression equation explains only a small portion of the variance in the dependent variable.

[6] A basic assumption of the least squares regression model is that residuals are uncorrelated. The residuals or error terms are the difference between the observed value of the dependent variable and the value predicted by the regression model. Residuals are correlated when the error term in any period t is dependent upon the value of the error terms in earlier periods.

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Appendix

Durbin's Method for Handling Serially Correlated Residuals

The standard regression model assumes that error terms are uncorrelated with each other, i.e.,

$$E(\epsilon_i \epsilon_j) = 0, \text{ for all } i \neq j,$$

where E denotes the expectations operator. Serial correlation among residuals can take several forms. A common assumption is that

$$\epsilon_t = \rho\epsilon_{t-1} + \mu_t, \qquad (4)$$

where the μ_t are serially independent and have constant variance.

Consider the regression model in equation (2), omitting the trend variable:

$$K_t = a_o + b_1 W_t + b_2 I_t + \epsilon_t. \qquad (2')$$

If the error term is distributed according to (4), lagging (2′) one period and multiplying by ρ obtains

$$\rho K_{t-1} = \rho a_o + b_1 \rho W_{t-1} + b_2 \rho I_{t-1} + \rho\epsilon_{t-1}; \qquad (5)$$

subtracting (5) from (2′) yields

$$K_t - \rho K_{t-1} = a_o(1-\rho) + b_1(W_t - \rho W_{t-1}) + b_2(I_t - I_{t-1}) + \mu_t. \qquad (6)$$

Since μt is serially independent, equation (6) can be estimated by ordinary regression methods, and the resulting coefficients will be unbiased and efficient. Estimating equation (6) is analogous to estimating first differences. If $\rho = 1$, the procedure would be identical to a first differences approach.

A value for ρ must be obtained before (6) can be estimated. Several methods for estimating ρ have been suggested. Durbin's method involves estimating the following equation:

$$K_t = a^* + b_1^* K_{t-1} + b_2^* W_t + b_3^* W_{t-1} + b_4^* I_t + b_5^* I_{t-1} + v_t, \qquad (7)$$

where b_1^*, the coefficient on the lagged dependent variable, serves as an estimate for ρ. A criticism of Durbin's procedure is that one observaton is lost in the lagging process. Given the large number of observations in our study, this did not constitute a serious problem. The following estimates for ρ were obtained by estimating an equation analogous to (7) for each of our regression models:

equation (1); $\rho = 0.98$,
equation (2); $\rho = 0.94$, and
equation (3); $\rho = 0.97$.

Important to note is that b_1 and b_2 are the same in equations (2′) and (6). Therefore, estimating equation (6) provides unbiased, efficient estimates of b_1 and b_2. An unbiased estimate for a_o is obtained by dividing the intercept term in (6) by $(1-\rho)$.

Kansas Labor Unions: Past, Present, and Future

The trades unions of the working people exist under economical conditions and cannot be stamped out. Water does not run uphill and though human ingenuity may force it up, it will still run downhill . . . And so it is with the wage workers' organizations—they exist, and no power on earth can push them out of existence.

Samuel Gompers, First President of the American Federation of Labor, speaking to the Kansas Federation of Labor in Topeka, Kansas, 1891[1]

Nancy Brown Johnson
David E. Shulenburger

Nancy Johnson is currently a Research Assistant at the University of Kansas Institute for Economic and Business Research and is enrolled in the Ph.D. program in the KU School of Business. Dr. Shulenburger is a Professor of Business Administration in the School of Business.

Introduction

Samuel Gompers came to Kansas in 1891 to help ensure that organized labor would endure in Kansas. It has done so. Its endurance, however, is no doubt more related to the success of organized labor in the rest of the United States than to the power of Gomper's rhetoric. From the formal establishment of the Leavenworth local of the National Typographical Union in 1857[2] to the pattern of strikes and representation election outcomes which exists today, Kansas' organized labor movement has largely grown and shrunk in concert, if slightly out of tune with this nation's organized labor movement.

This article briefly reviews the history of Kansas organized labor and considers in detail its present state. The study's aim is to use this review to help explain why membership in Kansas labor organizations represents a smaller proportion of the Kansas work force than organized labor constitutes of the U.S. workforce even though variations in the two proportions are closely related. Also considered is the issue of why indexes for Kansas trade union activity such as strike activity not only do not follow national trends but also are at a lower level.

I. Historical Development

The earliest Kansas trade union activity was more a manifestation of midwestern populist politics than of today's business unionism. Workingmen's leagues thrived throughout the U.S. from 1820 until the 1870s. The Workingmen's League of Topeka, which was formed in the 1860s, was representative of this movement. It included blue collar workers, farmers, and merchants and publicly took positions opposed to the development of a national bank and the power of industrial monopolies. It strongly favored easier money (the Greenback Movement) and wanted tighter restrictions placed upon immigration, child labor, and the use of convict labor in competition with free labor. In 1870, the Topeka Workingmen's League became an affiliate of the National Labor Union, which, despite its name, was largely a populist organization and not a labor union.[3] In 1872, the National Labor Union sponsored a candidate for the presidency of the United States and was largely destroyed as an organization when that candidate abruptly withdrew from the race.

The candle dropped by the National Labor Union was picked up by the Grand and Holy Order of the Knights of Labor who came to Kansas in 1873. By 1886, the Knights was the largest and strongest trade union of its day with over 750,000 members nationwide. The Knights fit hardworking Kansas well, accepting into membership all "productive" workers, a definition which excluded only bankers, lawyers, saloon keepers, physicians, stockbrokers, and Pinkerton detectives.[4] While the Order continued the populist tradition, it also engaged in collective bargaining with individual employers. In Kansas, as in the nation, it became involved in two important railroad strikes, the nationwide rail strike of 1877-78 and the Gould System strike of 1885-86.

The bloody 1877-78 strike which began in Baltimore and Pittsburgh and saw over 35 people killed and ten million dollars of property damage in those two cities spread to Kansas. Tension over the picketing of rail facilities in Emporia ended with the shooting by the state militia of a local minister.[5] The 1885 strike against Jay Gould's Southwest Railway System saw no violence and was the Knight's greatest trade union victory. The Gould system completey capitulated to the Knights' demands. Clearly, one reason for the Knights' success was Kansas Governor Martin's refusal to send out the state militia to suppress the strikers. He responded to the Missouri Pacific's call for the militia by saying that the strikers were ". . . sober, intelligent, orderly men" and encouraged the railroad to "arrange terms for an amicable settlement."[6] Governor Martin's stalwart stand not to intervene with troops represented one of the earliest occasions in which a state governor kept the power of the state out of a major private sector-labor relations dispute.

After this strike, Knights' membership soared in Kansas. In Atchison, membership increased from 400 to 1,000, and in Topeka four Knights Assemblies thrived.[7] Given the importance of railroading to early Kansas, this show of union strength might have laid the groundwork for Kansas unionism to become the nation's strongest.

The Knights' gains of 1885, however, were drastically reversed in the following year. Jay Gould provoked the Knights into another strike, and this time he was prepared and able to operate parts of the system with nonunion labor. In response, the Knights resorted to property damage to stop the road. In Parsons, 100 masked men broke into the machine shops and did considerable damage. On this occasion, Governor Martin was compelled to send in the state troops.[8]

Further jeopardizing the Knights' position, T. V. Powderly, the Grand Master Workman of the Knights, ordered the workers back to work prematurely. Thus, the strike was lost, and Gould reduced pay and working conditions to their pre-1885 levels. The Knights as an organization began to die, and with it went much of this state's early union movement.

The Knights were replaced by Samuel Gompers' American Federation of Labor, an organization which grew out of the Knights in 1886. The American Federation of Labor shortly became popularly known as "the cof-

The Knights fit hardworking Kansas well, accepting into membership all "productive" workers, a definition which excluded only bankers, lawyers, saloon keepers, physicians, stockbrokers, and Pinkerton detectives.

fin society," largely because it was deadly dull when compared with the Knights and other contemporary labor organizations. Gompers' belief in unionism "pure and simple" lead the American Federation of Labor to forsake populist political goals and ambitions and squarely concentrate on improving the wages and working conditions of craft workers. Its method for seeking improvement was collective bargaining with individual employers and the economic boycott. Its political involvement was limited to "supporting our friends and punishing our enemies" at the ballot box. The Federation endorsed few candidates and spent little time lobbying legislative bodies.

The Kansas Federation of Labor, an American Federation of Labor affiliate, was founded in 1899 as an umbrella organization including the carpenters, railworkers, typographical workers, cigarmakers and eleven other unions. As a state federation, its focus was on encouraging organization and political lobbying. Its major political goal was the eight-hour day.[9]

The Kansas Federation of Labor and its affiliates became the major expression of unionism in Kansas from 1900 through 1935. Labor's numbers grew and fell with the business cycle. The only organizational challenge to the American Federation of Labor and its unions came from the Industrial Workers of the World (IWW). Founded in 1905 in Chicago under the mottos "An injury to one is an injury to all" and "Abolition of the wage system," the IWW was an avowedly radical union which presented American workers with a revolutionary alternative to the AFL's conservative business unionism. Except for a brief initial membership surge, however, few American workers accepted the IWW alternative, and even fewer Kansas workers accepted it.

The IWW's membership in Kansas was largely confined to workers following the wheat harvest but who were not permitted to lead the pastoral life which that work implies. "Citizens" of Wichita in 1912, apparently acting as a mob, broke up an IWW led socialist meeting. The state and railroad police used force in Colby in 1916 to break up an IWW strike of 1,100 field workers who were demanding four dollars a day to work.[10] The hostility toward the IWW in the state reached the point that Kansas Governor Capper in 1915 advocated that IWW members "be employed without pay on rockpiles" as a means of keeping the IWW out of the state.[11] The reluctance of nonitinerate workers to join the IWW and governmental opposition to the organization was aggravated by the IWW's outspoken opposition to World War I. The federal government made wholesale arrest of its leaders, and Kansas, along with other states, passed criminal syndicalism laws which were directed against the IWW. Although the syndicalism laws were eventually ruled unconstitutional and the federal arrest lead to relatively few convictions, the IWW and the radical alternative it presented was largely quiescent by 1921.

Kansas attracted wide national attention to its labor relations policies with the passage of the Kansas Industrial Relations Act in 1920.[12] This act established the Industrial Relations Court which was empowered to hear all disputes "affected with public interest." This court could dictate wages, hours, and working conditions. All strikes, picketing, and boycotting were outlawed.

This radical piece of legislation was prompted by the 1919 nationwide strike of coal miners for a six-hour day and better pay. During that 1919 winter, Kansas Governor Allen took over the operation of all coal mines in the state and used college students and other volunteers to continue mine operations. The next spring, the Governor asked the legislature to pass the Industrial Relations Act.[13] It did so promptly.

In 1923, the U.S. Supreme Court ruled the power of the Industrial Relations Court to set contractual terms to be unconstitutional. In 1924, the Kansas legislature repealed the remaining provisions of the act. Still, the act had served to put Kansas labor organizations on notice that their standing before the legislature was tenuous and subject to quick reversal.

The 1920s and 1930s were hard times for unions everywhere. Membership declined almost universally. This decline was slowed by the passage in 1932 of the Norris-LaGuardia Act, which prohibited federal judges from intervening in most labor disputes, and the passage in 1933 of the National Industrial Recovery Act (NIRA). The NIRA contained provisions protecting the rights of workers to join unions and to participate in concerted activity. Although the NIRA was ruled to be unconstitutional, its labor provisions were salvaged by being written into the 1935 National Labor Relations Act. Labor now had legal protection, and the acts' enforcement mechanisms meant that labor's rights were to be respected.

U.S. trade union membership began to soar when John L. Lewis of the United Mine Workers aggressively began to organize industrial workers. After being expelled from the craft worker-oriented AFL, Lewis and his colleagues formed the Congress of Industrial Organizations in 1938. The CIO rapidly organized steel, automobiles, rubber, and other mass production industries.

Even though the Kansas State Industrial Council was formed in 1940 as the state CIO affiliate, the CIO made a much smaller impact on Kansas than on the nation. While it organized packinghouse, mining, chemical, metal, and other workers here, Kansas did not have the large, mass production plants that were the CIO's chief organizational targets elsewhere.[14]

During World War II, both AFL and CIO unions pledged not to strike for the war's duration. Many Kansas union leaders were placed on community boards concerned with the war effort. After the war, the explosion of strike activity that occurred elsewhere was muffled in Kansas.[15]

The decade of the 1950s saw slow, steady growth in Kansas unionism. The 1955 national merger of the AFL and the CIO induced the separate Kansas federations to merge in 1956. Kansas labor was united again with the United Mine Workers, the largest nonaffiliated union in the state. The state's mine workers were joined by the Teamsters (1957) and the UAW (1968) as nonaffiliated unions. The former was expelled from the AFL-CIO, the latter chose to resign. The UAW rejoined the AFL-CIO at the national level in 1982.

In 1958, Kansas became the 18th state to become a "right-to-work" state. Currently, 20 states have such laws.

From the late 1950s, the proportion of workers belonging to unions has declined both in Kansas and the nation. This decline has occurred partially because the manufacturing sector where unionism has historically been strongest has declined relatively as an employer of the labor force.

II. Recent Developments

UNION MEMBERSHIP

As noted, since the passage of the National Labor Relations Act, the *number* of labor union members has been climbing steadily upward, but, from the mid-1950s on, the *rate* of labor union growth has been slower than that of the labor force. Consequently, national labor union membership as a percentage of the labor force has been steadily declining. Kansas unions are not an exception to this pattern. On the other hand, labor associations—employee groups organized for the purpose of collective bargaining, generally comprised of public sector groups such as the National Education Association—are a relatively new phenomenon and are showing signs of growing pains with no definite membership patterns emerging. Kansas, again, is not an exception. Figure 1 clearly illustrates these trends.[16]

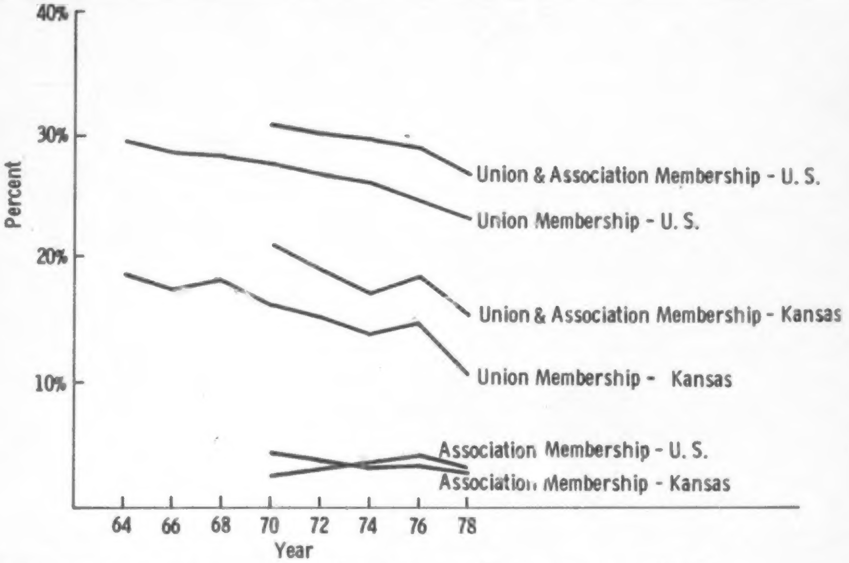
This figure provides two important insights into labor union membership in the state. First, labor union membership constitutes a much lower percentage of the Kansas labor force than the nation's. While Kansas had 12.8 percent of its nonagricultural workforce organized in 1978, the U.S. had 23.6 percent—a difference of over 10 percentage points. However, Kansas membership trends are not unique for states with right-to-work laws: the proportion of the nonagricultural labor force organized in Kansas is roughly equal to the proportion organized in other right-to-work states.

Second, changes in the proportion of the Kansas labor force organized run parallel to the nation's. From 1964 to 1968, this proportion dropped 6.0 percentage points for Kansas and 5.9 for the U.S., essentially equal reductions. The two prominent movements upward from the trend line in 1968 and 1976 are most likely slight aberrations in the data which can be explained by the previously footnoted problems with the data source and by the relatively small base on which the Kansas percentage is calculated. This small base can lead to pronounced, temporary movements in the data which disappear when the base is as large as that of the U.S. labor force.

Figure 2, which depicts total union membership in Kansas and the U.S., shows that, although union membership is on the increase in both, the number of labor union members in the U.S. has grown at the relatively slow rate and even more slowly in Kansas. For, after discounting the previously discussed caveats for 1968 and 1976, the trend line for Kansas is almost flat. In the fifteen-year period from 1964-1978, the growth of Kansas union membership was 7.3 percent, contrasted with the growth of U.S. union membership of 19.0 percent. This disparity between the different growth rates and union membership and between the proportion organized in Kansas and the U.S. is accounted for by Kansas experiencing a lower labor force growth rate.

Figure 1

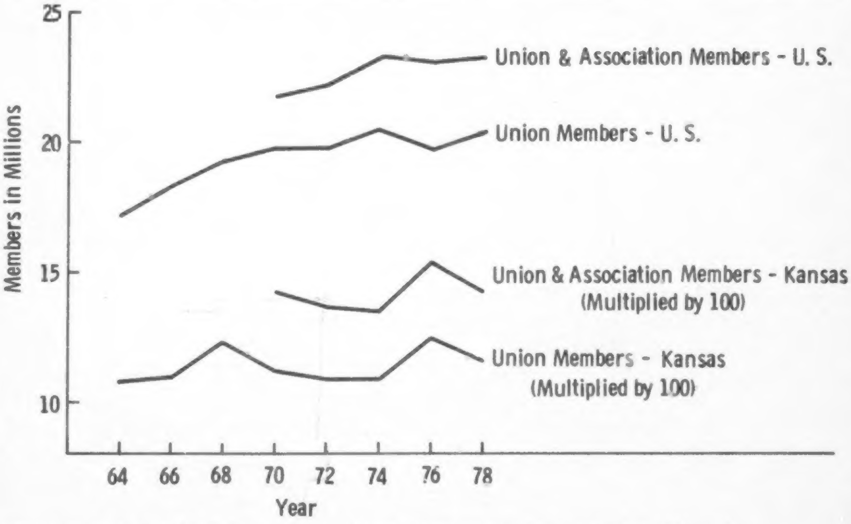
Union and Association Membership as a Percent of the Non-Agricultural Labor Force: Kansas and the U.S.



Source: Bureau of Labor Statistics, *Director of National Unions and Employee Associations*, 1965-1979.

Figure 2

Union and Association Membership in Kansas and the U.S.



Source: Bureau of Labor Statistics, *Directory of National Unions and Employee Associations*, 1965-1979.

The apparent relationship between association membership in Kansas and the U.S. is quite different from that of labor union membership. Generally, as seen in Figure 1, association membership as a percentage of the labor force in Kansas is equivalent to that of the entire U.S. Although in the early 1970s Kansas had a higher proportion of its labor force in associations than did the nation, by 1978 the U.S. proportion was greater than Kansas', at 3.3 percent and 3.0 percent, respectively. Figure 1, however, also shows that no other clear relationship exists between the membership patterns of associations in Kansas and the U.S., most likely due to the fact that associations are a fairly recent development. Whereas labor unions have had federal protective legislation dating back to the 1930s, associations are usually governed by individual state laws which were not widely adopted until the 1960s and 1970s. For example, much of Kansas' association growth was spurred by the passage of the Kansas Public Employees Relation Act in the early 1970s. Because of the comparative newness of associations and the diversity of state legislation throughout the United States, their patterns of development are not firmly entrenched. It is difficult, therefore, to ascertain any definitive trends or patterns for either Kansas or the U.S. and even more difficult to ferret out a relationship between the two.

REPRESENTATION ELECTIONS

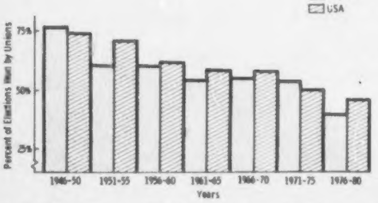
Because the National Labor Relations Act provides for elections as the primary means of determining in the private sectors whether a union will serve as the employees' representative, the number of successful representation elections also serves as an indicator of union strength.[17] Figure 3 shows that, since the mid-1950s, unions have become less successful in their organizing campaigns both in Kansas and the U.S. than during the preceding decades. Further, Kansas unions have an even lower success rate than the nation's. Although there were two time periods when Kansas unions won a higher percentage of representation elections than the entire nation's, they were both followed by lean years when Kansas unions were significantly less effective in organizing. Like the nation's unions, Kansas unions are capturing a decreasing percentage of elections over time, thereby contributing to the failure of labor union membership to keep pace with the labor force's growth.

WORK STOPPAGES

A synopsis of work stoppage data for Kansas contained in Table 1 indicates that few strikes, involving few workers and affecting little work time, have tended to occur in Kansas. Although more strikes involving more Kansas workers and a higher number of days idle have been occurring in the past twenty years than in the 1930s and 1940s, when the proportion of days idle is computed by dividing total strike days by the available nonagricultural working time, time lost to strike activity, on average, is declining in the state.

Upon contrasting Kansas work stoppage data with that of the nation (Figure 4), two key points become evident. First, in-state work stoppage activity bears little recognizable relationship to the national pattern. Second, Kansas loses a much smaller percentage of work time to work stoppages than does the U.S. In only three years of the twenty-six presented in Figure 4 did Kansas exceed the national rate; during many of the other twenty-three, the state rate was far below the nation's. By comparison, then, Kansas is a state characterized by labor peace.

Figure 3
Percent of NLRB Elections Won by Unions[1]



[1] Includes both certification and decertification elections after 1947.

Source: National Labor Relations Board, *Annual Report*, 1946-1980.

III. Possible Causes for the Pattern of Union Activity in Kansas

Several factors might account for the relatively small proportion of Kansas' labor force organized in unions and the state's relatively few strikes. These factors are: key historical events, right-to-work legislation, the industrial structure of the state, and the size of Kansas firms. The discussion which follows analyzes the credibility of each explanation.

Two key historical events—the Jay Gould strike of 1886 and the mine workers' strike of 1919—were important in establishing an environment in Kansas which was not conducive to union growth. The former strike resulted in the union movement's strength suddenly abating, while the latter resulted in strict state control of union activity. However, the relative importance of these two events in influencing the later development of unions in the state is difficult to discern.

A closely related question concerns whether the passage of right-to-work legislation has inhibited union growth, an issue which has been subjected to much debate. This question, however, is circular: does a low degree of unionization contribute to the passage of right-to-work legislation, or does the passage of right-to-work legislation lead to a low degree of unionization. The direction of causality has not been conclusively determined.[18] Thus, it is not clear whether the passage of right-to-work legislation in Kansas is the cause or result of the relatively low degree of unionization.

The nonagricultural portion of the industrial structure of Kansas is quite similar to the industrial structure of the nation (Table 2), and, thus, one might expect the degree of Kansas unionization to be similar to the nation's. That the percentages are different is due, in part, to the differences that do exist between the industrial structures of the state and national economies in the wholesale and retail trade, government, and manufacturing sectors. In particular, Kansas' under-representation in the large and heavily unionized manufacturing sector suggests that Kansas overall would be less unionized than the nation. However, this consideration does not fully explain the extent to which the level of Kansas unionization falls short of the nation's.

In contrast to labor union membership, Kansas membership in associations would be expected to be higher than the national average because Kansas has above average employment in the government sector.[19] As previously indicated, however, the proportion of the labor force's membership in Kansas associations is essentially equivalent to the nation's.

In addition to representing a smaller proportion of workers organized than nationally, Kansas unions also appear to be less strike prone than the state's industrial structure would suggest. To test this point, a weighted average was constructed for two representative years, 1969 and 1978, in which the U.S. days idle due to work stoppages in a particular sector was multiplied by the percent of the Kansas labor force in that sector. The resulting products for each sector were summed, as shown in the formula:

$$\sum_{i=1}^{n} D_iLf_i = S$$

where D_i = percent of days idle for the U.S.,
Lf = percent of the Kansas labor force in sector i,
n = the total number of sectors, and
S = the projected percent of non-agricultural work time lost due to work stoppages.

Table 1
Work Stoppages in Kansas

Year	Number	Workers Involved (in thousands)	Days Idle During Year (in thousands)	% of Estimated Non-Agricultural Working Time[1]
1950	41	16.7	191.0	–
1951	22	8.6	58.4	–
1952	46	15.0	184.0	0.16
1953	31	15.4	323.0	.27
1954	26	5.7	205.0	.17
1955	20	4.7	39.0	.03
1956	27	3.9	25.3	.02
1957	31	9.6	248.0	.21
1958	33	12.0	106.0	.10
1959	26	6.4	64.7	.05
1960	25	8.1	439.0	.39
1961	39	7.7	65.4	.06
1962	14	1.5	47.0	.04
1963	25	5.0	44.9	.04
1964	20	5.9	128.0	.11
1965	30	18.9	131.0	.11
1966	40	9.4	91.6	.07
1967	28	20.4	113.0	.09
1968	36	6.1	78.6	.06
1969	33	12.7	288.8	.21
1970	49	30.8	574.7	.43
1971	32	30.9	238.5	.18
1972	28	6.5	57.4	.03
1973	26	2.8	30.7	.02
1974	48	5.7	107.3	.05
1975	29	3.4	114.7	.06
1976	31	15.2	504.6	.24
1977	28	7.8	175.8	.08
1978	21	14.5	119.5	.05
1979	23	11.0	106.6	.04
1980	8	3.0	97.8	.04

[1] Data for these years are unavailable.

Source: Bureau of Labor Statistics, *Analysis or Work Stoppages*, 1977-1980.

Table 2
Employees on Non-Agricultural Payrolls by Industry, 1978

Industry	% of Total Non-Agricultural Workforce[1] Kansas	U.S.	Degree Unionized
Mining	1.4	1.0	greater than 75%
Construction	4.8	4.8	greater than 75%
Manufacturing	20.2	23.6	50%-74%
Transportation and Public Utilities	6.6	5.5	greater than 75% 25%-49%
Wholesale & Retail Trade	23.9	22.1	less than 25%
Finance, Insurance, Real Estate	4.9	5.5	less than 25%
Services	17.5	18.8	less than 25%
Government	20.6	18.7	25%-49%

[1] These categories do not total to 100% because of omitted sectors.

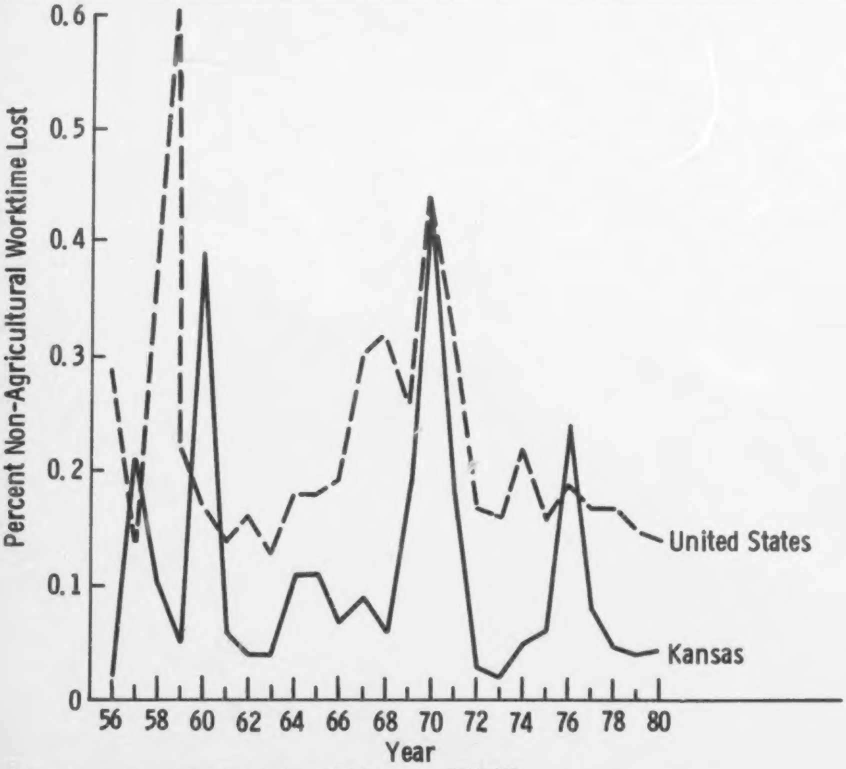
Sources: Bureau of Labor Statistics, *Employment and Earnings*, Vol 25(7), July, 1978, and Bureau of Labor Statistics, *Directory of National Unions and Employee Associations*, 1979, Bulletin 2079, September, 1980.

If Kansas strike activity were similar to the nation's, the projected proportion of man-days lost should equal the actual proportion of man days lost. In fact, for 1969 and 1978, S was equal to 0.32 percent and 0.12 percent, respectively. The actual time lost for these years was 0.21 percent in 1969 and 0.03 percent in 1978, thereby supporting the premise that Kansas unions have not been as prone to strike as the state's industrial structure would predict.

The typical Kansas firm tends to be smaller than the national average size. This fact, in turn, is another reason for the relatively low level of union activity and successful organization in the state because, historically, union organizing has focused upon larger firms.

Interesting, however, is the fact that unions recently have been concentrating on organizing smaller firms because they have cesfully "creamed off" the larger firms.[20] As such, Kansas would appear to be a likely focus for union activity, but, given the great number of small businesses, unions would have to enjoy remarkable success to have any discernable impact upon the state's proportion of union membership.

Figure 4
Percent of Non-Agricultural Time Lost to Work Stoppages



Source: Bureau of Labor Statistics, *Analysis of Workstoppages*, 1956-1980.

IV. Summary and Conclusions

Kansas labor union activity is well below that of the nation as measured on a number of indexes. Today's small but healthy trade union movement in the state has been affected by its historical development and the unique nature of Kansas business. In particular, the evolution of an inimical environment in the late 19th and early 20th centuries for union activity and the absence of many assembly line plants appear to have inhibited union efforts in the state. The preponderance of small businesses seem to have had the same effect. However, neither the same nor the opposite can be said about Kansas' right-to-work legislation: that policy's effect is still a matter of great debate.

To the extent that the past repeats itself, the expectation is that the pattern of future Kansas trade union activity will follow the nation's pattern but at a lower level.

Footnotes

[1] "In Labor's Cause," *Topeka Daily Capital*, February 25, 1981, p. 1.

[2] S.F. Vincent, "A History of Labor in Kansas," in *AFL-CIO, Kansas Resume* (Kansas State Federation of Labor: Topeka, 1961), p. 10.

[3] Marc Karson, "Labor History of Kansas," Pamphlet, 1955, p. 1.

[4] Jerome Wolf, *Ferment in Labor* (Glencoe Press: Beverly Hills, 1967), pp. 12-22.

[5] Vincent, p. 11.

[6] Karson p. 2.

[7] *Ibid*, p. 3.

[8] *Ibid*, p. 3.

[9] Vincent, p. 45.

[10] *Ibid*, p. 95.

[11] *Ibid*, p. 95.

[12] "Revised Statutes," Kansas, 1923, pp. 21-301, 304.

[13] Karson, p. 11.

[14] Vincent, p. 118.

[15] Sanford Cohen, *Labor in the United States* (Charles E. Merrill: Columbus, 1975), p. 180.

[16] Data for state labor union membership was not reported consistently prior to 1964. The data presented are reported by the Bureau of Labor Statistics in the *Directory of Unions and Employee Associations*. They obtained the data via questionnaires mailed to the Unions and Employee Associations. Consequently, it does not represent an unbiased source of data.

[17] Government employees do not fall in the jurisdiction of the NLRA. Consequently, the data presented in this section apply predominantly to labor unions. Some overlap may occur, however.

[18] J.O. Tollefson and J.A. Pichler, "A Comment on Right to Work Laws: A Suggested Economic Rationale," *The Journal of Law and Economics*, Volume XVII (1), April, 1974, pp. 193-196.

[19] N.B. Johnson, "State and Local Government Employment in Kansas," *Kansas Business Review*, Vol 6 (2), November-December 1982, pp. 12-13.

[20] J.A. Fossum, *Labor Relations* (Business Publications Inc: Dallas), 1979, p. 158.

Research Notes

Kansas Small Business: A Look at Current Problems and Sources of Help

Introduction

Small businesses have found it especially difficult to conduct business in the adverse economic climate of the last three years. In May 1982, the Kansas Small Business Conference was held in Lawrence, Kansas to discuss both the nature of the difficulties confronted by small business in Kansas and the sources of help available to this sector. The conference was cosponsored by the Kansas Association of Commerce and Industry, the Kansas Bankers Association, the Kansas Department of Economic Development, the National Federation of Independent Business, the U.S. Small Business Administration, and the Kansas Chamber of Commerce Executives.

Conference participants were surveyed about the problems they faced. In addition, the participants were asked about three means of addressing problems: 1) the frequency with which they attended seminars, 2) the publications and literature they found useful, and 3) what they thought the various levels of government could do to help them. This note reviews the results of the conference survey and provides a fairly detailed profile of how Kansas small business persons regard their economic environment and how they operate and wish to operate within that setting.

Characteristics of Survey Participants

A total of 71 managers from small businesses in Kansas and the Kansas City area participated in the survey. In addition to their responses to the three sources of possible help, participants also provided the following information about their companies: type of business, number of employees (part-time and full-time), annual sales, and number of years in business.

Table 1 offers a summary of their characteristics and shows that conference participants were primarily in service, retail, manufacturing, banking, and wholesale businesses. Over half indicated they had less than 10 full-time employees. Nearly two-thirds indicated they had no part-time employees while nearly one-third indicated 1-10 part-time employees. Only 3.0 percent indicated they had more than 10 part-time employees.

More than a third of the conference participants had 1981 sales of over $1,000,000. About one-quarter had sales from $250,000 to $1,000,000. The majority indicated they had been in business over five years.

Table 1
Characteristics of Businesses Participating in the Kansas Small Business Conference Survey

	Number (%) of Businesses
Type of Business	
Service (other than banking or restaurant)	20 (34)
Retail	17 (29)
Manufacturing	9 (16)
Banking	8 (14)
Wholesale	6 (10)
Other	5 (9)
Number of Full-Time Employees	
1-10	44 (65)
11-20	7 (10)
21-50	5 (8)
51-100	8 (11)
101-350	4 (6)
Number of Part-Time Employees	
None	47 (66)
2-10	22 (31)
11-99	2 (3)
Annual Sales in 1981	
Under $100,000	10 (19)
$100,000 to less than $250,000	8 (16)
$250,000 to less than $500,000	5 (9)
$500,000 to less than $1M	12 (19)
Over $1M	19 (35)
Number of Years Company Has Been in Business	
Less than 1 year	6 (11)
1-5 years	3 (6)
More than 5 years	44 (83)

Current Problems Faced by Kansas Small Businesses

Participants were given 10 categories of problems and asked to indicate their agreement or disagreement that a category was a problem in their business today. To analyze the participants' responses, the businesses were disaggregated according to type of business, size of sales, and length of time in business. Although the disaggregation reveals some differences in their responses, all classes of businesses ranked interest rates as the greatest problem and labor market factors the smallest. As seen in Table 2, inflation, federal taxes, and federal regulations rank high among all classes also.

Two points of particular interest are revealed by the participants' answers. First, the low ranking given to the quality and availability of Kansas labor suggests that Kansas small business persons have a positive perception of the state's labor force—a perception confirmed by other studies as well—and that the state's relative lack of surplus labor is not a problem to the smaller employer. The second point concerns the differences in the proportionate rankings of the credit factors by different classes of business. Notably, manufacturing viewed long-term credit as very unimportant, perhaps suggesting that, in general, small Kansas manufacturers operate from a more immediately responsive, flexible posture than do larger firms. Also noteworthy—if not surprising—is that businesses less than five-years old found both long- and short-term credit a much worse problem than did the older businesses, a response that reflects just one of a host of problems that new enterprises must face before they become established.

Frequency of Seminar Attendance

Almost three-quarters of the participants indicated that they had attended at least one seminar sponsored by their trade or professional association, the Chamber of Commerce, a local college or university, or the Small Business Administration during the previous year.

Table 3 summarizes the differences in the number of seminars attended as determined by seminar type. Seminars were more often attended by businesses with sales over $500,000 than by businesses with lesser sales. The managers from larger businesses most often attended seminars sponsored by trade and/or professional organizations and least often attended seminars by the Small Business Administration. In businesses with sales less than $500,000, the managers also most often attended seminars sponsored by trade and/or professional organizations, least often attending seminars sponsored by a local college or university.

The differences in the number of seminars attended by the various kinds of businesses revealed that banks attended the greatest number of seminars, followed by manufacturing concerns, other service organizations, and, finally, by retail establishments. This ranking might suggest that businesses with more resources and personnel would attend more seminars. Analysis of the number of seminars attended by the various ages of businesses indicated a greater number of seminars was attended by businesses more than five years old; businesses five years or less old registered a somewhat lower number of seminars attended.

Usefulness of Publications and Literature

Participants were given five sources of information and asked whether they agreed or disagreed that publications and literature from those sources were helpful in their business. The most frequently cited source of useful information, as Table 4 indicates, was an industry or trade association. Least useful according to respondents were state government publications.

The importance of industry/trade publications is confirmed by the responses of the businesses by class (type, size, and longevity) as well. In general, the breakdown by class did not reveal any significant dissimilarities in the pattern of answers, the range of preference usually running from industry/trade to state government materials. One distinctive tendency, however, is revealed by the business class analysis. That is, businesses with sales less than $500,000 appear more apt to use local information sources, such as the Chamber of Commerce or area banks, than are firms with higher sales. Again, this finding seems to mirror the supposition that businesses with limited resources will be limited in the breadth of support to which they can appeal.

Table 2
Survey Participants' Rankings of Problems Faced by Small Businesses

Category	Percent "Agreeing" or "Strongly Agreeing" that Item Is a Problem They Face in Business
Interest Rates	94%
Inflation	82
Federal Government Regulation	79
Federal Taxes	77
Availability of Long-Term Credit	65
Availability of Short-Term Credit	57
Wage Rates	54
Government Aid to Small Business	51
Quality of Labor Force	40
Availability of Labor	31

Table 3
Seminar Attendance by Seminar Sponsor

Seminar Sponsor	Number of People Indicating Attendance (% of Survey Participants)	Average Number Seminars Attended[1]
Trade or Professional Organization	34 (48%)	2.2[2]
Local Chamber of Commerce	18 (25)	2.2
Local College or University	19 (27)	1.6
Small Business Administration	18 (25)	1.3
Total Indicating Attendance at any of the Above	53 (75)	3.2

[1] Average based on the number of people who indicated attendance.

[2] The mean for trade or professional oganization is significantly different than the mean for college or university at the .10 level and significantly different from SBA at the .05 level. No other pairs of means are significantly different.

Table 4
Survey Participants' Ranking of Usefulness of Publications and Literature

Category	Percent "Agreeing" or "Strongly Agreeing" that Material Was Useful to Them
Industry & Trade Associations	95%
Small Business Magazines	86
Accountants	84
Small Business Administration	83
Banks	83
Chamber of Commerce	82
State Government	64

How Government Can Help Small Business

Survey participants were given a set of three open-ended questions asking what was the most important action government could undertake for them. The questions concerned the federal, state, and local levels of government. The responses for each level of government underwent content analysis and are summarized in Table 5.

Reducing government regulations is a high-priority concern across all levels of government and represents the focus of anti-interventionist feeling among the participants. This attitude, however, is qualified by the apparent reluctance of the respondents to ask government "to stay out completely" of their business: less than 12 percent wanted any level—federal, state, or local—to keep hands off.

Lower taxes were also desired from all governments, again reflective of the participants' preference for a more laissez-faire policy. On the other hand, a strong desire for a more effective, active pro-business policy at the state and local levels was apparent from the responses.

It is clear from the participants' answers, which showed little variation by business class, that interest decreases concerning the help a government could provide as the participants' survey moved from federal to state to local levels.

Summary

In short, then, the small businesses represented at the conference identified a variety of problems. As one response to those problems, they indicated a strong interest in seminars. Over half had attended at least one seminar in the prior year, and those attending seminars tended to participate in more than one. In addition, the respondents found publications from a variety of sources useful to them. The respondents also indicated that all levels of government could undertake action which would be beneficial to them. There were more frequent concerns expressed about the federal government than about state government, more about state than local.

Participants indicated that they want more public sector support, but, yet, they also indicated that they want the government to stay out of their business in a number of areas. This response pattern seems contradictory; however, it does show the high need for autonomy of the small business person. As well, the respondents indicated they do not want to be told what to do; but it could be concluded that due to the difficult economic conditions and the problems they cited, they feel a need for help from the government to survive in the current business environment. The greatest problem areas—taxes, interest rates, and government regulations—were all identified as areas in which the government could help.

The most frequently cited source of useful information was industry and trade association magazines. This response pattern indicates that 1) these publications are specifically directed to a particular type of business and are, therefore, easier to relate to than something more general or that 2) participants more often have access to publications and literature from industry associations.

Dr. Marilyn L. Taylor
Director
Small Business Institute
Assistant Professor
The University of Kansas School of Business
Steven Heeney
Assistant Coordinator
Small Business Institute
The University of Kansas School of Business
Suzanne Beck
The University of Kansas School of Business

Table 5
Survey Participants' Suggestions Concerning How Government Could Help Small Business

	Federal Government N=57		State Government N=43		Local Government N=38	
Category	Number Citing Category	Percent	Number Citing Category	Percent	Number Citing Category	Percent
Decrease Regulations	16	28%	7	16%	4	11%
Lower Taxes	11	19	8	19	7	18
Balance the Budget	11	19	–	–	–	–
Less Paperwork	7	12	4	9	–	–
More Support	7	12	11	26	13	34
Lower Interest Rates	7	12	–	–	–	–
Stay Out	5	9	4	9	4	11
More Responsible Government	3	5	–	–	–	–
Cut Spending	–	–	3	7	3	8
More Efficient Management	–	–	3	7	3	8
Financial Assistance	–	–	2	5	–	–
Help Get Contracts	–	–	2	5	–	–
No Inventory Tax	–	–	2	5	–	–
Other	7	12	–	–	4	11

1982: A Down Year for the Economy . . . and for Economic Forecasters Too

Introduction

Economic forecasting is big business. An increasing number of individuals and institutions are becoming involved, including many major universities and large banks who now issue their own forecasts. Moreover, forecasting itself has become a growth industry with a number of companies having sprouted in the past several years specializing in developing economic forecasts. The largest and most prominent among this group are Data Resources, Inc., headed by former presidential advisor Otto Eckstein, and Wharton Econometrics, under the direction of Nobel laureate Lawrence Klein.

The forecasting techniques employed and the type of forecast issued depend upon the economic perspective of the individual forecasters. Those who over the years have been broadly labeled as Keynesians, including Eckstein and Klein, develop large, complex computer models designed to simulate the structure of the economy. The models of those forecasters classified under the rubric of monetarists tend to be much simpler with future economic behavior tied closely to the past and present behavior of aggregate measures of the money supply.

Most forecasts are quarterly with projections generally being made over the forthcoming four quarters. Annualized predictions are often made even further into the future. Some, such as Data Resources, Inc., hedge their bets by developing more than one forecast, each based upon differing assumptions, with probabilities imputed to the likelihood of each being realized. Although some forecasts are distributed free, subscribing to others can be very costly. The out-of-pocket cost of subscribing to a forecasting service, however, can be small compared to the losses possible from basing business or personal financial decisions on an erroneous forecast.

An obvious question, then, is how good are these forecasts? The historical performance of forecasting models, particularly the large, structural econometric models, has been mixed. Generally, they have performed well over periods of economic stability, but, during times of exogenous shocks or major policy shifts, their performance has deteriorated. This variation is to be expected, according to the rational expectations school of economic thought which is most commonly associated with the names of Robert Lucas and Thomas Sargent, respectively of the Universities of Chicago and Minnesota. Rational expectationists believe people will adjust their optimal behavior in response to any policy shift or outside shock—in this sense, they can't be fooled; that is, they are rational. In essence, this sort of response by economic agents constitutes a change in the economic structure that the forecasting models are trying to simulate. By this reasoning, econometric models become outdated during periods of instability and, consequently, are unable to adequately forecast during these periods.

Assessing the 1982 Forecasts

The 1980s must be considered an economically unstable period. Two recessions in the decade's first three years left output levels lower after 1982 than they were at the end of 1979. In addition, the ushering in of a new administration espousing nontraditional economic policy, the development of new instruments to encourage and facilitate savings, uncertainty over the appropriate exercise of monetary policy, and significant instability in major world commodity markets added to the economic disarray facing forecasters.

This recent period, then, represents an occasion to evaluate the forecasters' performance within a demanding set of circumstances. Such an evaluation can be done by comparing a number of forecasts for 1982 made during the last months of 1981 or the first weeks of 1982 with the actual quarter-by-quarter performance for 1982. It should be stated at the outset that the performance in general was not good and that the purpose in making this evaluation is not merely to cast stones but, rather, to provide a word of caution concerning the incautious acceptance of economic forecasts. As well, this comparison affords an opportunity to offer a few words of explanation, as in the previous paragraphs, regarding the nature of forecasting and its inherent problems.

The Federal Reserve Bank of Richmond[1] has compiled a summary of a number of the 1982 forecasts and also has computed a median or "typical" forecast for 1982 based upon the individual projections. The typical forecast is compared below in Table 1 with the actual outcomes for 1982.

From the table, it is apparent that, on average, forecasters expected a fairly robust recovery to occur early in 1982. After a 1.0 percent drop in real GNP in 1982:I, they anticipated a resumption in real growth beginning in the second quarter, eventually leveling off at about a 5.0 percent annual rate in the third quarter. From examining the predicted growth in the major components of GNP (rows 2-4 in Table 1), it is readily discernible that forecasters expected the second quarter upturn to be stimulated by a strong revival in investment demand. Investment was relatively strong in 1982:II and 1982:III, but primarily due to a buildup of inventories. The bottom fell out, however, in 1982:IV when inventory levels were sharply drawn down.

Personal consumption expenditures remained below the forecast values over each quarter in 1982. This result, combined with the overly optimistic predictions for investment demand, caused forecasted real GNP growth to exceed the realization in each quarter. Only in the second quarter was the average forecast value reasonably close to the realization, and even this result was attained, not through prudent forecasting, but, rather, through the good fortune of errors in the consumption and investment forecasts partially offsetting each other.

As a direct result of the errors made in predicting real growth, the typical forecaster was also way off the mark in 1982 when it came to projecting unemployment. Consistent with their anticipation of a strong recovery in 1982, most forecasters saw unemployment falling gradually throughout the year, finally dipping below 8.0 percent in the fourth quarter. As we all know, however, unemployment trended in precisely the opposite direction to the point where it reached 10.0 percent in the third quarter and approached 11.0 percent at the end of 1982:IV.

As Table 1 also indicates, the forecasters were off base in respect to their inflation predictions as well. In this instance, fortunately, actual developments were better than had been anticipated. As measured by changes in the GNP price deflator, inflation was expected to remain around the 7.0 percent level throughout 1982. In reality, it remained well below this mark during each of the four quarters.

In principle, forecasting the immediate future should be easier than forecasting over a longer time horizon. Consequently, the forecast for 1982 would be expected to be most accurate for the first quarter and to become progressively less accurate thereafter. As a rough-and-ready test of this conjecture, the absolute percentage point error for real GNP, the GNP price deflator, and the unemployment rate were averaged for each quarter to obtain a crude measure of the median fore-

Table 1

Evaluating a Typical Economic Forecast for 1982 (Percentage Changes at Annual Rates Unless Otherwise Noted)

	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
	Forecast	Realized	Error[1]	Forecast	Realized	Error	Forecast	Realized	Error	Forecast	Realized	Error
Gross National Product	5.1	−1.0	6.1	10.1	6.8	3.3	12.2	5.8	6.4	12.0	1.7	10.3
Personal Consumption Expenditures	9.7	7.6	2.1	8.3	6.1	2.2	10.5	8.1	2.4	12.0	9.4	2.6
Gross Private Domestic Investment	−11.7	−38.8	27.1	12.1	17.1	−5.0	23.4	11.4	12.0	19.5	−38.6	58.1
Government Purchases	6.7	2.4	4.3	6.1	0.5	5.6	8.3	13.9	−5.6	10.9	16.3	5.4
Gross National Product (1972 Dollars)	−1.0	−5.1	4.1	2.7	2.1	0.6	4.9	0.7	4.2	4.8	−1.9	6.7
GNP Implicit Price Deflator	7.0	4.3	2.7	7.1	4.6	2.5	6.8	5.0	1.8	7.4	3.7	3.7
Unemployment Rate[2]	8.6	9.1	−0.5	8.6	9.4	−0.8	8.4	10.0	−1.6	7.9	10.7	2.8
Corporate Profits After Taxes	−2.3	−60.3	58.0	18.6	4.6	14.0	8.8	11.1	−2.3	10.0	N.A.	–

[1] Error is calculated for each quarter as the absolute percentage difference between the forecasted value and its realization. A minus sign is used to indicate when the realized value exceeded the forecast.

[2] Realized values are the average of monthly values in that quarter.

cast's accuracy for each quarter. By this test, forecasters were most accurate in their predictions for the second quarter with an average error of 1.2 points; the first and third quarters, at 2.4 and 2.5 points, respectively, were almost identical. The fourth quarter's average forecast error at 4.4 points was, as expected, the largest.

As discussed earlier, the accuracy of the 1982:II forecast was primarily a function of good fortune rather than good forecasting. Therefore, this crude test does not tend to reject the premise that near-term forecasts will tend to be most accurate. In fact, the magnitude of the forecast errors for the first quarter are surprisingly large.

The importance of errors in forecasts for individual quarters is minimized if the errors tend to offset over the year, thereby producing reasonably accurate annualized estimates. As we have seen, however, this did not happen in 1982. Rather, forecasters were overly optimistic in terms of output and unemployment for each quarter, and they were consistently too pessimistic in their evaluation of the prospects for inflation. The result, as Table 2 indicates, is that the typical annualized forecast for 1982 bears little relation to what actually happened. In most cases, actual growth in GNP and its components is only about half of what was typically forecast. Looking at some specifics, we find that the typical forecast overstated real GNP by 40 billion dollars and understated the average unemployment rate by 1.3 points. Particularly noteworthy is the forecasters' failure to capture the significant inventory sell-down which occurred in 1982. While an eight billion dollar net accumulation of inventories was predicted on average, the actual result was a net sell-down of 21.4 billion dollars. This egregious error spread throughout the forecasts, causing, in turn, other variables to be misforecast as well. In fact, the 30 billion dollar error in inventories accounts for almost three-fourths of the median forecast error in GNP and is the single most significant element which contributed to the forecasters' downfall in 1982. An important element to note is that the behavior of business inventories depends critically upon the outlook and attitude of business owners and managers. As such, it has a very human element that is not easily captured within an economic model.

Up to this point, we have been examining the typical or median forecast compiled by the Richmond Fed from a number of separate forecasts. We have seen that this average forecast, on the whole, performed quite miserably in 1982. It is worth asking, however, whether individual forecasters might not have done significantly better than the average. The answer, based upon the sampling of forecasts summarized in the Richmond Fed study, is a qualified "no." Obviously, some forecasts were more optimistic than others, but everyone erred on the high side of output and inflation—in essence, underestimating the strength of the recession and the significance of the trend towards reduced inflation.

Among the 17 forecasts examined in the Richmond report, the UCLA Business Forecast Project and Alex Burkholder of WGN Continental Broadcasting Co. most accurately predicted the severity of the recession. Each forecast overestimated real GNP by only about six billion dollars. The reason for success in each case is that these forecasters accurately perceived the magnitude of the downturn which was to occur in 1982:I, whereas most other forecasters were anticipating the beginning of a recovery during that quarter. Burkholder forecasted a 9.2 percent average unemployment rate for 1982 which also turned out to be the most accurate predic-

Table 2

Typical Annualized 1982 Forecast and Actual Annualized 1982 Performance: Annual Percentage Changes (Dollar Values Are in Billions)

	Actual 1981	Forecast 1982	Actual 1982	Percent Change 1981-1982	
				Forecast	Actual
Gross National Product	2,937.7	3,150	3,057.5	7.2%	4.1%
Personal Consumption Expenditures	1,843.2	2,027	1,972.0	10.0	7.0
Durables	234.6	251	242.7	7.0	3.5
Nondurables	734.5	795	762.7	8.2	3.8
Services	874.1	982	966.6	12.3	10.6
Gross Private Domestic Investment	471.5	469	421.9	−0.5	−10.5
Nonresidential	346.1	351	347.5	1.4	0.4
Residential	105.0	109	95.8	3.8	−8.8
Change in Business Inventories	20.5	8	−21.4	–	–
Net Exports	26.1	15	16.5	−42.5	−36.8
Government Purchases	596.9	639	647.1	7.1	8.4
Gross National Product (1972 Dollars)	1,502.6	1,514	1,474.0	0.8	−1.9
Rate of unemployment (Percent)	7.6	8.4	9.7	10.5	27.6
Industrial Production Index (1987 = 100)	151.0	151.8	138.6	0.5	−8.2
Consumer Price Index (1967 = 100)	272.4	294.2	283.0	8.0	3.9
Producer Price Index (1967 = 100)	269.8	287.0	277.8	6.4	3.0

tion. UCLA, in spite of a properly pessimistic growth forecast, anticipated that the annualized unemployment rate would be only 8.3 percent.

If we were to give a "rose-colored glasses" award, it would go to Lacy H. Hunt and the Fidelity Bank who forecast a 1.8 percent annualized real growth rate in 1982—an overstatement by about 57 billion dollars. Hunt got in trouble immediately by predicting 2.0 percent growth for what turned out to be the disastrous first quarter. Close runners up, however, would be Hunt's colleagues at the Chemical Bank who, for some reason, believed unemployment would average only 7.3 percent over 1982 and would drop to 6.6 percent in the fourth quarter.

A Look at the Typical 1983 Forecast

Finally, as a lagnaippe, presented in Table 3, for whatever it may be worth, is the 1983 median forecast as compiled once again by the Richmond Federal Reserve Bank.[2] As a group, the intrepid band of forecasters is predicting the recovery to be a modest one with unemployment remaining painfully high throughout 1983. Inflation is expected to remain moderate with both the consumer price index and the GNP price deflator rising at an annual rate of 5.0-5.5 percent.

Although it is too early to evaluate the accuracy of this year's forecasts, it is interesting to note that the median forecast was apparently "on the mark" in the first quarter in that the initial report on real GNP growth 1983:I coincides exactly with the forecast's 3.1 percent figure.

Footnotes

[1] Sandra D. Baker, ed., "Business Forecasts 1982," Federal Reserve Bank of Richmond, February, 1982.

[2] Sandra D. Baker, ed., "Business Forecasts 1983," Federal Reserve Bank of Richmond, February, 1983.

Richard Sexton
Research Economist
The Institute for Economic
and Business Research

Table 3
A Typical Economic Forecast for 1983
(Percentage Change at Annual Rates Unless Otherwise Noted)

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Gross National Product	8.2	9.2	10.1	10.7
Personal Consumption Expenditures	8.4	8.8	8.8	9.5
Gross Private Domestic Investment	16.6	17.8	19.3	18.8
Government Purchases	5.8	5.9	7.4	8.4
Gross National Product (1972 Dollars)	3.1	3.4	4.4	4.7
Corporate Profits After Taxes	3.7	17.2	19.9	22.8
Rate of Unemployment[1]	10.6	10.4	10.0	9.7
GNP Implicit Price Deflator	5.5	5.1	5.3	5.6

[1] Quarterly levels, percent.

A Buying Power Index for Kansas

An important component of determining the marketability of a product in a specific location is whether or not the residents of that community can afford to purchase the product. Obviously, other factors such as the product's quality and marketing strategy influence its ultimate success, but, nonetheless, if the community does not have the income to purchase the product, it is destined to fail. The Sales and Marketing Management Association has developed a measure titled the Buying Power Index that is designed to ascertain the aggregate purchasing power of the population in various geographical locations. It is generally used by retailers as an indicator of the relative strength of the market for their product. This research note examines the construction of the Buying Power Index and investigates what it indicates for the future of Kansas' purchasing power.

The Buying Power Index is comprised of three main elements: effective buying income, retail sales, and population. Effective buying income (EBI) is the measure developed by the Sales and Marketing Management Association to measure disposable income. It is a sum of all income (wages, investments, and transfer payments) less taxes and personal contributions to social insurance. Thus, EBI serves as an indicator of discretionary income or of the maximum amount people are able to spend. Retail sales, conversely, measures that portion of discretionary income people do spend on retail goods. The retail sales figures employed by the Sales and Marketing Management Association are an update of the 1977 Census of Retail Trade. The population figure is also obtained from the Bureau of Census, specifically from their 1980 Census of Population and is based on the number of people living in a geographical area at the end of the year.

To construct the Buying Power Index, the EBI, population, and retail sales figures are converted to a percentage of the total U.S./Canadian market and weighted as follows:

$$\text{Buying Power Index} = \frac{5(\%\ \text{EBI}) + 3(\%\ \text{Retail Sales}) + 2(\%\ \text{Population})}{10}$$

Thus, the Buying Power Index measures the percent of the total U.S. and Canadian market that an area has in its purchasing power. Essentially, the Buying Power Index is a function of how much people can spend, how much they do spend, and how many spenders there are in a given geographical location. The Sales and Marketing Management Association assigned weights based on the relative importance they accorded each factor's contribution to buying power. From this basic model, they then developed forecasts as to the direction and magnitude of the change of each factor and its ultimate impact on buying power.

Reconstruction of the Buying Power Index using publicly available government data is possible, given some important considerations. First, although the government data are available (as discussed below), they are located in several different publications, making the data base somewhat cumbersome to compile. Secondly, and more important, the government does not routinely make forecasts of these data. Consequently, the user must develop his/her own projections, which may or may not be more accurate than that of the Sales and Marketing Management Association.

Given these caveats, an index using historical government data can be reconstructed from Bureau of Economic Analysis and Bureau of the Census data. The Bureau of Economic Analysis publishes personal income figures which could serve as a proxy for the EBI. The Bureau of Census data on retail trade and population were the actual source of data used by the Sales and Marketing Management Association. The 1977 Census of Retail

Trade and the 1980 Census of Population serve as benchmarks for the retail sales and population projections.

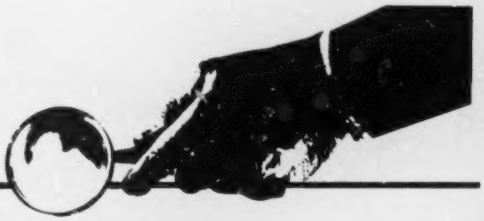
The Buying Power Index for Kansas projects a decline in the relative share of the total U.S. market from 1.10 percent to 1.07 percent over the period from 1980 to 1992. This decline, given that it is over a 12 year period, should be carefully regarded. Projections over a 10-year period (actually longer, since the data are projected from the benchmark year) are embodied with a major assumption that historical trends will continue on into the future. Given that Kansas has experienced population declines in recent years, the fact that Sales and Marketing Management Association is projecting declines in the state's Buying Power Index is not surprising. However, this forecast precludes the possibility that this trend could be slowed or even reversed.

Also projected by the Sales and Marketing Management Association is a decline from 1.04 to about 1.00 in Kansas percent of the total U.S. population; however, the proportionate decline in EBI is projected to be smaller in magnitude. Thus, the Association projection implies that the proportionate buying power of Kansans is actually increasing because the population proportion is declining faster than the Buying Power Index. Regardless, there is an indication of a slight downward trend in the state's purchasing power relative to the rest of the U.S.; however, this trend is strongly based on the assumption that the population proportion will continue to decline.

Therefore, because these projections are based on historical trends, they should be interpreted cautiously. If the environment of the Kansas economy changes such that the population, retail sales, or personal income trends vary from the past, the Buying Power Index is an inappropriate indicator of consumer purchasing power. An alternative may be to construct an index based on current government data.

Nancy Brown Johnson
Research Assistant
The Institute of Economic
and Business Research

Economic Conditions
The National Review



How Strong a Recovery?

Although the official declaration by the National Bureau of Economic Research has yet to be made, consensus is that the recession ended in December and that the economy is moving through the initial stages of a recovery. What almost nobody agrees upon, however, is how strong the recovery will be. As discussed elsewhere in this issue of *Kansas Business Review*, the typical forecaster was not terribly optimistic at the end of 1982 when most were first framing their 1983 forecasts. The median forecast for 1983 called for annualized growth of 3.1 percent for 83:I, 3.4 percent for 83:II, 4.4 percent for 83:III, and 4.7 percent for 83:IV. These figures portend a rather weak recovery by historical standards.

The mood recently has become much more bullish, however, as reports began to indicate that the fourth quarter decline in 1982 was not as steep as originally estimated (real GNP fell only 1.1 percent at an annualized rate compared to initial estimates of 2.5 percent) and that the new year got off to a roaring start with a strong January performance. In particular, January's Index of Leading Indicators was up an eye-catching 3.5 percent, the largest single month increase since 1950; the Coincident Indicators were up as well, registering a 1.1 percent gain. Factory orders grew a robust 2.5 percent in January, and durable goods orders rose 5.7 percent for the month. Most encouraging, perhaps, was that industrial production increased 1.3 percent.

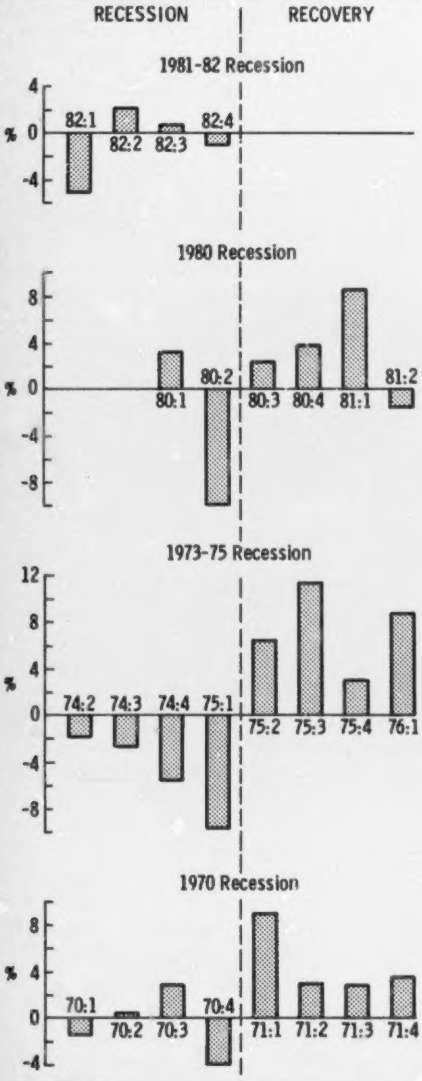
All of this good news prompted an upward revision of forecasts, including that of the Reagan Administration. The official line now calls for 4.7 percent growth in real GNP over 1983 compared to the earlier forecast of 3.1 percent. This revision has brought the Administration into line with private forecasts, although some remain decidedly more optimistic--predicting growth rates in excess of 6.0 percent.

Unfortunately, January's fledgling recovery stumbled in February. Industrial production rose again but, this time, by only 0.3 percent. New factory orders were down 2.2 percent for the month with durables, off 3.2 percent, leading the way. The Coincident Indicators were also down in February, falling 0.2 percent for the month. The housing industry, which had been a bellweather during the previous months, also took a step back in February as new home sales fell 5.9 percent (an annualized decline of 35,000 units) from January's level. Some analysts, however, asserted that the February housing report was just recording an adjustment to the sharp gains recorded in January. Also sharply down in February was the severely depressed machine tool industry with orders off 40 percent from a year ago and continuing to hover around the 100 million dollar per-month level. News of the machine tool industry's continuing woes cannot be encouraging because the tool sector will be important in a revival of capital goods spending and its lingering weakness suggests that the upturn in investment is not immediately at hand.

Thus, the year to this point has been difficult to read. Based upon present information, 1983 has produced two comparatively strong months and one relatively weak month of recovery. It may be that a portion of the contrasting monthly performances is attributable to weather conditions which prevailed during these months: January was unusually mild, thereby tending to spur construction activity, whereas February's weather was on the whole far more winter-like. At this time, although the data are incomplete, indications are that March was another strong month for the economy. Unemployment in March fell slightly to 10.3 percent after having been at 10.4 percent during the first two months of the year. Also encouraging is that on a seasonally adjusted basis total employment rose for the month by about 40,000 jobs and, further, that manufacturing jobs rose with factory workers' unemployment falling from 13.3 percent to 12.8 percent. Additional good news is that sales in March were sharply up for many of the nation's large retailers. Moreover, industrial production recovered from the February setback, rising 1.1 percent in March.

The Commerce Department estimates that real output grew about 3.1 percent in the first quarter. This figure, it should be noted, is identical to the guess contained in the median forecast. In its early stages, however, the recovery has been narrowly based, concentrated primarily in the housing sector and in reductions in the rate of inventory slowdown. What is particularly significant is that consumers have yet to participate fully in the recovery. For example, retail sales in February were off 0.4 percent, the third monthly drop in a row following adjusted declines of

Figure 1
Real GNP During Recent Recessions (Compounded Annual Rates of Change)



0.5 percent in January and 1.1 percent in December. Although some observers are arguing that the Census Bureau's estimations of retail sales are flawed and that the actual sales performance is stronger than what the figures are indicating, nonetheless it appears that the broad base necessary for a sustained recovery cannot be established until consumers regain confidence and begin to loosen their purse strings.

A Comparison with other Recent Recessions

Although every recession is unique, considerable insight can be gained by examining previous recessions and their eventual recoveries to discern trends which might indicate the prospective strength of the current recovery. Such an examination of the previous three recessions is undertaken in Figures 1-4 which depict, respectively, real GNP, unemployment, industrial production, and inflation over the last 12 months of each recession and the first 12 months of the ensuing recovery (the 1980 recession lasted only six months, so the figures only include data for that interval).

Examining Figure 1 shows that great variation exists among the recessions in terms of the severity of contraction in real output. The 1970 slump was comparatively mild, not unlike the recent retraction in that respect. The sharpest and most sustained output contraction occurred in 1973-75. More important for analytic purposes, however, is an examination of the patterns of recovery. Strikingly, the initial stages of recovery were robust in both the 1970 and 1973-75 recessions.

Real output surged at an annual rate of about 9.0 percent in the first quarter of recovery after the 1970 slump, thereafter settling into a less-than-inspiring pattern of growth in the 3.0-4.0 percent range. After the severe 1973-75 crunch, output jumped upward at an annual rate in excess of 6.0 percent in the first quarter of recovery and soared above 10 percent in the second. Comparatively, the 3.1 percent real growth estimated for the first quarter of the current recovery is quite weak.

Figure 2
Total Unemployment During Recent Recessions as a Percentage of the Civilian Labor Force

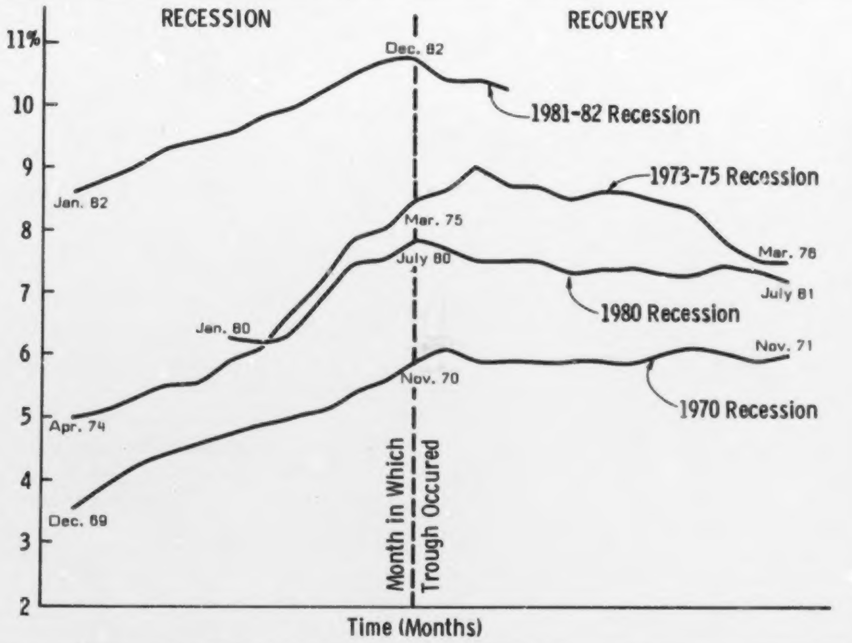
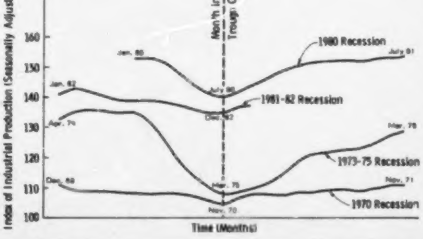


Figure 2, which examines the employment side, generally bears out the axiom that unemployment is usually a lagging indicator. The dashed line in the figure indicates the trough of each recession. For both the 1970 and 1973-75 recessions, unemployment continued to rise during the initial stages of recovery. Unemployment reacted coincidentally to the recovery in 1980, but the decline was small, and unemployment did not begin to approach the pre-recession levels before the 1981-82 recession set in. It appears that unemployment in our most recent slump is also moving in lockstep with the general recovery, having dropped 0.5 points in the first quarter of recovery. However, as the material in Figure 2 indicates, even as a recovery progresses through its first year, unemployment tends to

Figure 3
Total Industrial Production During Recent Recessions

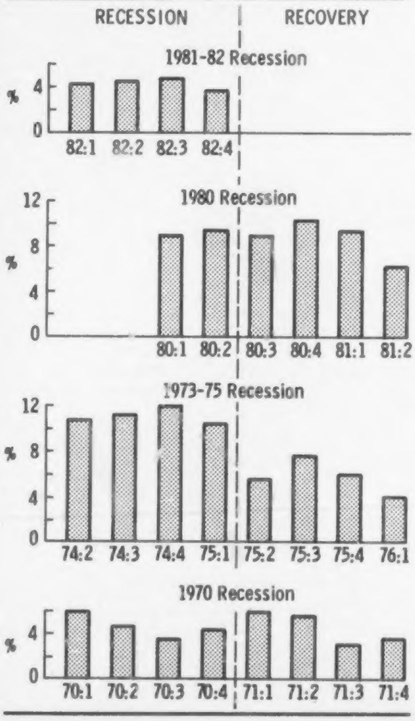


remain well above pre-recession levels. This pattern holds true for each of the previous recessions examined.

Figure 3 (industrial production) shows that industrial output and industrial employment tend to bear the brunt of most recessions and that their recovery is integral to the revitalization of the economy as a whole. Figure 3 verifies the pronounced downturn in industry in each of the four recent recessions. Actually, on a comparative basis, the industrial contraction in the most recent recession was mild. In all cases, overall industrial production turned up coincidentally with the officially designated period of recovery. And, compared to unemployment, it is quick to recover, approaching or surpassing the recent pre-recession peaks after one year's time in each of the three recent instances.

Finally, Figure 4 examines the pattern of inflation during the recent recessions and through the first year of recovery. The historical pattern and theorized relationship are that inflation falls in recessions, picking up again as recovery builds. The pervasively high levels of inflation in the past several years beginning with the 1973-75 recession have partially obscured this relationship; however, the pattern is apparent during the 1970 recession. The 1973-75 recession was induced by supply shocks (the oil embargo and significant worldwide crop failures) which explain why prices rose in spite of the recession. The 1980 contraction was really too short to establish a pattern, and, in the recent contraction, again the traditional pattern of falling rates of inflation held true. (The pattern is not particularly apparent in Figure 4 because only four quarters of data are included.)

Figure 4
Inflation During Recent Recessions
(Annual Uncompounded Rates of Change in GNP Price Deflator)



Importantly, in none of the other recent recessions has inflation picked up significantly during the initial year of recovery. Actually, it has tended to fall. This behavior is quite consistent with the theory which suggests that, due to substantial excess capacity created by a recession, growth should not engender significant price boosts during a recovery's initial stages.

Outlook

Despite the fact that little evidence exists to indicate that a *broad based* recovery is in fact underway, most forecasters remain quite optimistic. They, however, have had a proclivity towards over-optimism throughout the recession, so it is important to distinguish what can be supported by evidence from what rests on mere impression and habitual expectations. On this basis, a 3.1 percent growth rate in the first quarter is encouraging, but the fact that it was concentrated in inventories is not heartening. For example, as Figure 1 indicates, mild growth was recorded last year in the second quarter in the middle of the recession under much the same circumstances.

The missing element in the recovery matrix is, as noted, consumer spending. With factory utilization at about 68 percent and with unemployment in excess of 10 percent, the resources to generate a period of sustained, relatively inflation-free growth are available if consumers provide businesses the demand-side impetus to produce. Several factors, unfortunately, continue to hold consumers back:

- Personal income, due to the recession's lingering effects, has grown slowly—only 0.1 percent in February and 0.2 percent in January. On the optimistic side, though, this measure of buying power did jump 0.6 percent in March.
- Although interest rates have been falling, in real (inflation-adjusted) terms they remain very high. Specifically, most consumer lending rates have fallen only three to four percentage points from their peaks in spite of an annualized inflation decline in excess of six percentage points.
- Shaken by a disappointing economic environment throughout the 1980s, consumers maintain little confidence in the economy which, consequently, makes them loathe to undertake major purchases and incur debt.

Although interest rates have not declined significantly for several months and no major movement is expected in this area in the near term, it is likely that personal income, fueled by the first quarter growth in output, will continue to rise at a stronger rate over the next few months. Continued notice of good economic news, such as further declines in the unemployment rate, can be expected to help restore consumer confidence. Also, analysts are banking on the July 1 tax cut to do what it failed to do last year—namely, spark consumer spending.

If these events fall in place as expected, they will gradually induce a revival in consumer spending which will interact with an expansionary federal budget to provide the demand-side pressure needed to stimulate production and, eventually, employment. At that point, the supply-side incentives may come into play and initiate the long awaited upturn in investment and capital formation.

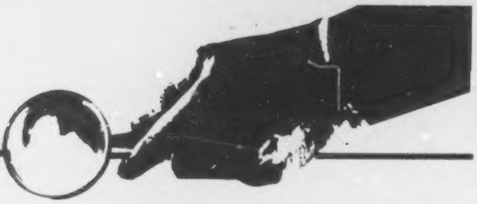
Under this scenario, the legacy which this recovery will leave is one of slow but gradually increasing growth in contrast to the sharp surge and subsequent fall back which characterized the recoveries from both the 1970 and 1973-75 recessions.

Until more is known, however, forecasting growth rates and unemployment rates remains a very risky business. At the time of this writing (mid-April), it is not possible to fully assess the March performance, but indications are that it was quite good. If so, such a performance would give 1983 two strong months out of the first three, providing a solid start to recovery. Very likely, unemployment, however, will remain above 10 percent at least until summer, and, even in the rosiest forecasts, it is predicted to remain above 9.0 percent throughout 1983. Inflation is easier to forecast. The first quarter will be almost inflation free on average. Although no more periods of declining CPI are apt to occur in the next several months, a return to monthly inflation in the 0.2-0.4 percent range—translating into an annualized inflation rate of 3.0-4.0 percent—can be anticipated. This outlook is based on the likelihood of stable energy prices, food cost increases in the 2.5-3.5 percent range, and little price-related impetus from the recovery during its first year.

With unemployment so high and industrial output so depressed from three consecutive years of stagnation, the nation cannot afford another aborted recovery such as occurred after the 1980 recession. Sustained years of growth are imperative if the damage wrought over these past years is to be undone. Much, then, depends on what happens in the remaining months of 1983.

Richard Sexton
Research Economist
The Institute for Economic
and Business Research

The Kansas Economy



The Meaning of Monthly Unemployment Rates

Analyzing monthly unemployment rates is like staring at the capstone of a building—if only this uppermost portion is examined, then both the look and the essence of the entire structure are lost. Similarly, monthly unemployment rates are only summary statistics that can obscure relevant economic information. Consequently, the purpose of this review is to expose the structure of unemployment in the state by assessing the basic elements of unemployment rates and their implications for Kansas.

The unemployment rate is simply the number unemployed divided by the number in the labor force:

$$\text{Unemployment Rate} = \frac{\text{Number Unemployed}}{\text{Number in the Labor Force}}$$

Embodied in this calculation is the assumption that the number in the labor force is relatively invariant; thus, when the unemployment rate changes, it is due to changes in the number of unemployed. However, in fact, the number in the labor force is not stable. It can and does vary significantly from month to month. Thus, it is possible that the unemployment rate could rise simply from a decline in the labor force while the number of unemployed remains constant. It is, therefore, important to examine the factors influencing changes in the size of the labor force.

The most obvious factor affecting the size of the labor force is migration in or out of an area. However, subtle features of the classification system of who is included in or excluded from the labor force also explain labor force variations. Everyone 16 years or over, whether employed or unemployed, may be counted in the labor force. Those not counted include anyone 16 years or older not classified as employed or unemployed and who are not inmates of institutions. They include: those engaged in homework or school, the physically or mentally disabled, the retired, the voluntarily idle, seasonal workers in the off season not looking for work, and discouraged workers (the unemployed not looking for work because they believe no jobs are available). Thus, someone who goes back to school or gives up hope of finding work is not part of the labor force.

Changes in the size of the labor force are not independent of changes in employment and unemployment. If an area's employment prospects are poor, people will leave to seek work elsewhere. The reverse situation is also true. Further, secondary family wage earners who find themselves out of work may decide to withdraw from the labor force and remain at home but, given a more favorable job market, may decide to return to work.

Implicit in the above discussion is how changes in the level of employment affect unemployment rates. Remembering that the total labor force is the sum of the unemployed and employed, then, if the number of unemployed remains constant while the number of employed drops, the total labor force becomes smaller. Thus, the numerator of the unemployment rate equation remains unchanged while the denominator decreases, causing the unemployment rate to ascend.

Data for the Lawrence SMSA follow the above pattern (Table 1). Grouped by month to account for seasonal factors, the data illustrate a relatively invariant number of unemployed in the 1980s. However, contributing to the increasing unemployment rate is a decreasing number of employed. Lawrence has lost upwards of 1,500 jobs since late 1980. That Lawrence is a university town where a major portion of its population is highly mobile probably contributes to the fact that, when the number of jobs decline, people leave rather than stay and be counted as unemployed.

The experience with the Lawrence labor force is not typical for the state (Table 2). The state has experienced both a generally increasing level of unemployment and a generally shrinking labor force in the 1980s, suggesting a fair degree of mobility out of the state when employment decreases. Yet, the unemployment figures indicate that people do remain despite the decline in jobs.

In conclusion, the monthly unemployment rate is a synthetic statistic which affords only a narrow perspective on the changes in the labor force. Just as a building's capstone alone gives no information about, say, the vaulted ceilings of the edifice or its motif of articulated lines, unemployment rates tell very little about the specifics of the labor force. Further, this article has explored just the first floor of a many-storied building—for it just began to touch on the complexities of labor force statistics.

Nancy Brown Johnson
Research Assistant
The Institute for Economic
and Business Research

Agriculture

Farm Prices PIK Up

All farm prices rose 0.8 percent in March, the third consecutive monthly increase with beef, corn, eggs, and wheat the principal contributors. March's gain followed on the heels of a substantial 3.1 percent boost in February and another 0.8 percent gain in January. Cattle and corn prices also acted as

Table 1
Labor Force Trends—Lawrence SMSA

	October			November			December			January		
	1980	1981	1982	1980	1981	1982	1980	1981	1982	1981	1982	1983
Civilian Labor Force (thousands)	36.4	35.8	35.1	35.6	35.3	34.5	35.4	35.1	34.3	34.7	34.1	33.1
Employed (thousands)	35.0	34.4	33.6	34.1	33.9	33.0	33.9	33.7	32.8	33.2	32.6	31.6
Unemployed (thousands)	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.4	1.5	1.5	1.5	1.5
Unemployment Rate (%)	3.8	3.9	4.3	4.2	4.0	4.3	4.2	4.0	4.4	4.3	4.4	4.5

Source: Research and Analysis Section
Division of Staff Services
Kansas Department of Human Resources

Table 2
Labor Force Trends—Kansas

	October			November			December			January		
	1980	1981	1982	1980	1981	1982	1980	1981	1982	1981	1982	1983
Civilian Labor Force (thousands)	1222.6	1221.7	1214.3	1213.3	1214.4	1200.8	1209.5	1206.8	1194.7	1184.7	1190.6	1165.7
Employed (thousands)	1174.3	1178.6	1142.4	1164.9	1169.2	1128.3	1161.5	1158.7	1121.0	1135.7	1133.9	1085.5
Unemployed (thousands)	48.3	43.1	71.9	48.4	45.2	72.7	48.0	48.1	72.7	48.4	56.7	80.2
Unemployment Rate (%)	4.0	3.5	5.9	4.0	4.0	6.0	4.0	4.0	6.2	4.1	4.8	6.9

Source: Research and Analysis Section
Division of Staff Services
Kansas Department of Human Resources

catalysts for the three months of increases as did the price for broilers. Combining the monthly increases generates a 4.7 percent rise in overall farm prices during the first quarter of 1983. This increase puts farm prices 0.8 percent above the year-ago pace but still nearly 7.0 percent below the levels of two years ago.

The Reagan Administration's novel payment-in-kind (PIK) program is given considerable credit for the modest surge in prices. PIK was the Administration's response to ever increasing reserve stocks of major food grains and feed grains. These stocks have accumulated in recent years due to farmers' chronic proclivity towards over production combined with recession-induced weakness in worldwide demand. As a result of efforts to bolster sagging farm prices, increasing amounts of farm commodities have been stockpiled in recent years, either on farms, in government warehouses, or in the farmer-owned reserves. The net effect of these huge reserves has been to depress prices for major commodities and to generate substantial storage costs as well.

Evidence documenting the substantial increase in grain reserves can be found in Table 1 which contains total grain stocks for the U.S. and Kansas at the beginning of 1981, 1982, and 1983. Stocks for both the nation and the state are higher in 1983 than in 1982 for all commodities except sorghum grain. In many cases, the increase has been quite dramatic. For example, corn stocks at the start of 1983 were 43.8 percent above their level of two years ago while wheat stocks rose by about one-third. Although Kansas wheat reserves have not grown as rapidly as the national average, more wheat stocks are maintained in Kansas than in any other state.

PIK was conceived in this context as a means of tackling the low price/low income problem plaguing farmers and, at the same time, of reducing the burden of burgeoning government outlays due to deficiency payments and commodity storage costs.

PIK programs were established in January for wheat, corn, grain sorghum, upland cotton, and rice. PIK is in addition to the government's acreage-reduction program and paid-land diversion. To become eligible for PIK, farmers had to sign up for the 20 percent cash incentive set-aside of their acreage base. Then, under PIK they had the option of idling an additional 10-30 percent of the base and receiving as payment 80 percent of the crop that could theoretically be grown on the idled acreage for corn and grain sorghum and 95 percent for wheat. (The winter wheat incentive is greater to compensate for the fact that farmers had already incurred planting costs.) An additional option presented to farmers was to idle their entire acreage base. To be eligible for this option, farmers bid for the percent of in-kind payment at which they would be willing to idle their acreage. Bids could range from 50-80 percent for corn and sorghum and 50-95 percent for winter wheat. The government, then, had the option of accepting or rejecting bids. For those bids accepted, each farmer receives the percentage in-kind payment which he bid. In-kind payment will be received at the usual harvest date, so a normal harvest will be simulated under PIK with the important exception that a significant portion of the "harvest" will come out of storage rather than off the land. Although farmers have the option of not following through on the cash diversion program, compliance with agreements made under PIK is mandatory with stiff penalties facing noncompliers.

Participation in PIK has been substantial, exceeding nearly everyone's expectations. Figures on enrollment in the acreage reduction and PIK programs are contained in Table 2 for wheat, corn, and sorghum for the United States and Kansas. Nearly 30 percent of Kansas wheat acreage and 37 percent of corn and sorghum acreage are scheduled to be diverted under PIK and the paid diversification program. Participation levels nationally are even higher with 35 percent of the wheat acreage and 39 percent of the corn acreage scheduled for diversion. In Kansas, 81 percent of wheat farms with base acreage enrolled in one of the programs, and 76 percent of corn and sorghum farms participated. Important to bear in mind is that acreage enrolled in either of the PIK options cannot be withdrawn without facing penalty, so the combined acreage diverted under these options represents the minimum reduction in 1983 acreage.

No doubt, the heavy signup for PIK and the cash set-aside has caught analysts off guard, so the overall impact upon output and prices has not been clearly established. For example, the projected set-aside is not consistent with farmers' own projected 1983 plantings which were based upon a survey taken well after the PIK program had been announced. Apparently, as the program's advantages became better understood, farmers who had originally planned not to participate had a change of mind.

Table 3 compares actual 1982 acreage with original 1983 projections based upon prospective plantings and with current estimates based upon the PIK sign-ups. Nationally, corn acreage is now projected to decline by one-third in 1983 over last year; wheat and sorghum grain acreage is expected to be off one-fifth. Acreage in cotton and rice, the other PIK commodities, is likely to be off one-fourth. Comparing these new projections to those based upon farmers' responses in the prospective plantings survey reveals the sizable additional acreage reductions now planned due to PIK. Examples are an additional 14.5 million acre reduction in corn planting and a nearly 18 million acre additional decline in wheat.

Outlook

Initial projections based upon the PIK signups are that the corn harvest will be down to 5.6 billion bushels from last year's record 8.4 billion bushels (off one-third). The wheat harvest is expected to come in at 2.3 billion bushels, down 18 percent. Soybean output is anticipated to drop 8.0 percent as growers move from soybeans into the presumably higher return PIK commodities. The USDA estimates that PIK will cut wheat inventories by 10 percent and corn stocks by 45 percent by the fall of 1984.

Anticipation of future tightening in suppliers has already sent grain prices upward, and increases in grain futures contracts suggest that long-term price improvement is in place as well. Overall, farm income stands a good chance of rising in 1983 for the first time in four years.

Corn, which had been selling for under $2.00 per bushel as recently as October, was commanding an average price of $2.67 in mid-March. Similarly, wheat prices have improved $0.40 per bushel to $3.65 from the low harvest price recorded last July. Soybean prices stood at $5.63 in mid-March, up from their recent low of $5.06 in October.

Although further price improvement for grains is likely to be generated over the spring and early summer months, the gains will be moderated by large southern hemisphere harvests of the 1982-83 wheat crop, shrinking world trade in wheat and coarse grains, and, as well, continuing large carryovers in spite of PIK's best efforts to reduce them.

As grain prices rise, they become reflected in high costs to livestock producers, so PIK will have an impact as well in the cattle, hog, and broiler markets. Cattle on feed in the major feeding states remains high. However, reduced slaughter of nonfed cattle will slow the gain in total beef production. Beef cattle prices in Kansas averaged $61.70 per cwt. in mid-March, the highest level attained in 10 months. Further modest gains may be forthcoming as meat supplies in general remain tight and as economic recovery stimulates demand. Best estimates are for price gains to range from $3.00-$6.00 per cwt. through the spring months.

Hog prices in Kansas dropped sharply to under $50.00 per cwt. in March in response to seasonal increases in supplies. In spite of better returns over the past 12 months, production is not expected to expand in contrast to the pattern typically observed in the hog cycle. Rather, in response to their poor financial condition, farmers appear to be raising cash and limiting expenses by reducing breed-

Table 1
Beginning Year Stocks for Major Grain Commodities

Commodity	1983	1982	Percent Change 1982-83	1981	Percent Change 1981-83
	January 1 Total Stocks[1] (Millions of Bushels)				
			United States		
Corn	8,422.7	6,967.7	20.9%	5,858.8	43.8%
Sorghum	418.4	689.4	−39.3	792.6	−47.2
All Wheat	2,521.4	2,178.0	15.8	1,903.2	32.5
Soybeans	1,826.5	1,631.4	12.0	1,520.5	20.1
Oats	473.6	365.2	29.7	391.0	21.1
			Kansas		
Corn	123.5	68.7	79.8%	87.1	41.8%
Sorghum	231.1	229.3	0.8	160.0	44.4
All Wheat	448.4	329.0	36.3	390.8	14.7
Soybeans	42.6	36.9	15.4	31.2	36.5

[1] Includes farm reserves + stocks maintained under the Commodity Credit Corporation and the Farmer Owned Grain Reserve.

Table 3
Prospective 1983 Plantings Based Upon Reported Participation in Acreage Diversion Programs—Comparisons to 1982 Plantings and Originally Projected 1983 Plantings

	Thousands of Acres					
	Projected 1983—Based Upon Program Participation		Actual 1982		Original 1983 Projections	
Commodity	U.S.	Kansas	U.S.	Kansas	U.S.	Kansas
Corn	54,900	980	81,909	1,400	69,569	1,150
Sorghum	12,900	3,200	16,144	3,900	13,068	3,800
Wheat	61,970	10,500	87,277	13,990	79,883	13,200[1]
Soybeans	[2]	[2]	72,162	1,850	68,825	1,720

[1] Actual acreage seeded in winter wheat

[2] No PIK program exists for soybeans. Soybean production may be reduced indirectly due to PIK as soybean growers move acreage into PIK commodities due to their enhanced price prospects.

Table 2
Farm Acreage Enrolled in Paid Diversion and PIK Programs U.S. and Kansas

	Kansas (Thousands of Acres)		United States (Thousands of Acres)	
	Wheat	Corn & Sorghum	Wheat	Corn & Sorghum
Total Acres	13,990.1	6,292.3	90,806.0	101,059.3
Acres Enrolled	12,638.8	5,514.2	78,308.9	78,824.4
Total Acreage Diverted[1]	4,171.1	2,325.0	32,052.6	39,429.9
Percentage of Total Acreage Diverted	29.8%	36.9%	35.3%	39.0%
Acreage Reduction Paid Diversification Only[2]				
Base Acres	7,352.4	2,260.1	31,745.0	19,635.2
Acres Diverted	1,470.5	452.0	6,349.0	3,927.0
PIK (10-30 Percent Option)[3]				
Base Acres	4,512.1	2,618.3	38,883.8	45,325.0
Acres Diverted	1,926.2	1,237.2	18,023.5	21,695.4
PIK (Whole Base Option)				
Base Acres	774.4	635.8	7,680.0	13,793.2
Acres Diverted	774.4	635.8	7,680.0	13,793.2
Percentage of Total Acreage Diverted Under PIK[4]	12.9%	21.4%	19.7%	26.1%

[1] Diverted acreage must be placed in approved conservation uses. In some cases, it may be used to plant another crop.

[2] Farmers signing up for this program only idle 20 percent of their base acreage in return for eligibility to receive crop production loans and target prices.

[3] Acreage diverted under this option is 20 percent of the acreage base (because farmers must comply with the acreage reduction and paid diversification program) plus 10-30 percent of the base.

[4] Total acres diverted under PIK are acres diverted under the 10-30 percent option less the portion (20 percent of the base acreage) diverted under the paid diversification program, plus the acreage diverted under the whole base option.

ing herds. As a consequence, first and second quarter production is expected to be down 10 and 3.0 percent, respectively, over last year. These tight supplies will stimulate a reversal of the March price downturn with prices perhaps averaging around $55 per cwt. through spring.

The all-food component of the Consumer Price Index rose 4.0 percent in 1982 compared to increases of 8.6 and 7.9 percent in 1980 and 1981, respectively. Only pork, up 12.9 percent, increased at a double-digit rate in 1983. Eggs and poultry prices to consumers actually declined as did prices for sugar and sweets and fats and oils. The major cause of higher food prices in 1983 was higher marketing costs. Overall, food marketing costs rose 5.0 percent in 1983 while farm costs of food rose by only 1.0 percent. Marketing costs account for over one half of consumers' food bills, and, primarily because these costs are expected to be relatively stable in 1983, USDA does not anticipate significantly higher food costs in the near term despite somewhat higher farm prices. Current estimates are for all food costs to rise 3.0-4.5 percent in 1983, very similar to the pattern observed in 1982.

Richard Sexton
Research Economist
The Institute of Economic
and Business Research

TABLE I. NATIONAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
A. INCOME MEASURES						
GROSS NATIONAL PRODUCT	BIL.'72$	(Q)	1ST	1488.5	4.6	0.3
DISPOSABLE PERSONAL INCOME	BIL.'72$	(Q)	1ST	1063.8	2.2	1.5
PERSONAL CONSUMPTION	BIL.'72$	(Q)	1ST	972.4	1.8	0.6
GROSS PRIVATE INVESTMENT	BIL.'72$	(Q)	1ST	1499.5	-73.3	719.0
NET EXPORT OF GOODS & SERV.	BIL.'72$	(Q)	1ST	24.0	55.0	-36.5
PERSONAL SAVINGS	BIL.'72$	(Q)	1ST	131.9	9.3	20.1
SAVINGS RATE*	%	(Q)	1ST	5.9	0.1	0.6
B. LABOR FORCE						
CIVILIAN LABOR FORCE	MIL.	(M)	MAR.	110.5	-0.5	0.8
EMPLOYED	MIL.	(M)	MAR.	100.8	0.4	1.3
UNEMPLOYED	MIL.	(M)	MAR.	11.4	-11.5	14.9
UNEMPLOYMENT RATES*						
ALL	%	(M)	MAR.	10.3	-0.1	1.3
MEN	%	(M)	MAR.	9.6	-0.3	1.7
WOMEN	%	(M)	MAR.	8.8	-0.1	1.2
TEENS	%	(M)	MAR.	23.5	1.3	1.6
BLACKS	%	(M)	MAR.	19.9	0.2	1.9
WHITES	%	(M)	MAR.	9.0	-0.2	1.1
C. PRODUCTION						
INDUSTRIAL PRODUCTION		(M)	FEB.	137.3	0.3	-3.5
DURABLE PRODUCTION		(M)	JAN.	135.1	53.8	3.1
HOUSING STARTS**	TH.	(M)	JAN.	1716.0	430.4	75.5
AUTO SALES		(M)	DEC.	8.7	-89.4	14.5
D. PRICES						
1. CONSUMER PRICES						
CPI-W, ALL ITEMS	1967=100	(M)	MAR.	293.0	2.9	3.7
CPI-U, ALL ITEMS	1967=100	(M)	MAR.	293.4	2.5	3.6
FOOD	1967=100	(M)	MAR.	283.5	6.0	2.9
HOUSING	1967=100	(M)	MAR.	319.2	6.0	4.1
APPAREL	1967=100	(M)	MAR.	194.0	18.8	1.5
TRANSPORTATION	1967=100	(M)	MAR.	288.6	-10.3	1.2
MEDICAL	1967=100	(M)	MAR.	350.0	3.8	9.8
2. PRODUCER PRICES						
ALL COMMODITIES	1967=100	(M)	MAR.	300.5	-2.8	0.9
INDUSTRIAL COMMODITIES	1967=100	(M)	MAR.	313.4	-3.8	0.8
CRUDE MATERIALS	1967=100	(M)	MAR.	322.1	4.1	0.7
CAPITAL EQUIPMENT	1967=100	(M)	MAR.	286.5	1.3	3.9
3. AGRICULTURAL PRICES						
PRICES RECEIVED	1977=100	(M)	MAR.	133.0	9.1	-1.5
PRICES PAID	1977=100	(M)	MAR.	159.0	7.6	2.6
PARITY RATIO	1977=100	(M)	MAR.	84.0	0.	-3.4
E. BANKING AND FINANCE						
1. MONEY SUPPLY MEASURES						
M 1	BIL.$	(W)	APR.14	496.1	-29.8	9.6
2. MONEY SUPPLY COMPONENTS						
CURRENCY	BIL.$	(W)	APR.14	137.3	0.	9.1
TOTAL CHECKABLE DEPOSITS	BIL.$	(W)	APR.14	354.3	-41.6	9.9
TOTAL TIME DEPOSITS	BIL.$	(W)	APR.14	698.9	23.5	-12.4
3. INTEREST RATES*						
PRIME RATE	%	(W)	APR.14	10.5	0.	-6.0
DISCOUNT RATE	%	(W)	APR.14	8.5	0.	-3.5
HOME MORTGAGE RATE	%	(M)	MAR.	12.6	-0.3	-4.5
90 DAY CD'S	%	(W)	APR.21	8.6	-0.3	-5.8
3 MONTH T-BILLS	%	(W)	APR.21	8.1	-0.3	-5.9

*NUMBERS IN PERCENT CHANGE COLUMN INDICATE ABSOLUTE CHANGE OF THE INDICATOR.

NOTE: PERCENT CHANGE COLUMN IN THIS TABLE INDICATES THE AVERAGE ANNUAL PERCENT CHANGE UNLESS INDICATED. ** INDICATES CHANGE IS NOT AT ANNUAL RATE.

TABLE II. GENERAL BUSINESS INDICATORS FOR KANSAS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MANUFACTURING						
AVERAGE WORK WEEK	HRS.	(M)	MAR.	38.6	1.0	-3.5
AVERAGE WEEKLY EARNINGS	HRS.	(M)	MAR.	355.1	1.6	4.3
INITIAL CLAIMS FOR UNEMPLOYMENT INSURANCE	TH.	(M)	MAR.	15.8	-99.9	-99.9
NEW INCORPORATIONS						
IN-STATE FOR PROFIT		(M)	MAR.	629.0	75.2	43.3
OUT-OF-STATE FOR PROFIT		(M)	MAR.	147.0	4.3	-10.4

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
KANSAS SECRETARY OF STATE

TABLE III. EMPLOYMENT AND INCOME IN KANSAS

INDUSTRY			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL INDUSTRIES	TH.	(M)	MAR.	897.6	0.8	-3.9
MANUFACTURING	TH.	(M)	MAR.	154.6	1.2	-14.2
DURABLE GOODS	TH.	(M)	MAR.	90.5	1.6	-18.1
STONE, CLAY, GLASS	TH.	(M)	MAR.	6.3	1.6	1.6
PRIMARY METALS	TH.	(M)	MAR.	2.4	-7.7	-27.3
FABRICATED METAL PRODUCTS	TH.	(M)	MAR.	10.6	1.0	-10.9
MACHINERY (INCL. ELEC.)	TH.	(M)	MAR.	3.5	-85.5	-89.1
TRANSPORTATION EQUIPMENT	TH.	(M)	MAR.	38.5	4.1	-16.7
AIRCRAFT AND PARTS	TH.	(M)	MAR.	29.6	5.0	-24.5
OTHER DURABLE GOODS	TH.	(M)	MAR.	9.2	5.7	-14.8
NONDURABLE GOODS	TH.	(M)	MAR.	64.1	0.8	-8.3
FOOD AND KINDRED PRODUCTS	TH.	(M)	MAR.	23.0	0.	-9.1
MEAT PRODUCTS	TH.	(M)	MAR.	10.1	0.	-7.3
APPAREL	TH.	(M)	MAR.	3.5	2.9	0.
PRINTING AND PUBLISHING	TH.	(M)	MAR.	16.4	0.6	-3.0
CHEMICALS	TH.	(M)	MAR.	8.7	10.1	2.4
PETROLEUM AND COAL	TH.	(M)	MAR.	4.2	2.4	-14.3
OTHER NONDURABLE	TH.	(M)	MAR.	9.1	2.2	-15.0
MINING	TH.	(M)	MAR.	17.0	-0.6	-15.4
OIL AND GAS EXTRACTION	TH.	(M)	MAR.	15.3	-1.9	-14.0
CONTRACT CONSTRUCTION	TH.	(M)	MAR.	32.2	7.0	-10.8
TRANS., COMM., ELEC., GAS	TH.	(M)	MAR.	62.4	-0.5	2.3
WHOLESALE TRADE	TH.	(M)	MAR.	64.2	0.5	-1.2
RETAIL TRADE	TH.	(M)	MAR.	158.0	0.7	-1.4
FINANCE, INSURANCE, REAL EST.	TH.	(M)	MAR.	47.9	-0.6	1.3
SERVICES	TH.	(M)	MAR.	171.1	0.8	-3.8
FEDERAL GOVERNMENT	TH.	(M)	MAR.	26.0	-2.3	2.8
STATE AND LOCAL GOVERNMENT	TH.	(M)	MAR.	164.2	0.1	-1.8
PERSONAL INCOME*	MIL.$	(Q)	4TH	28038.0	5.7	5.6

*PERCENT CHANGE COLUMN INDICATES AVERAGE ANNUAL RATE.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
BUREAU OF ECONOMIC ANALYSIS

TABLE IV. CONSUMER PRICES--KANSAS CITY
CPI FOR ALL URBAN CONSUMERS (CPI-U)

CATEGORY		LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
ALL ITEMS*	1967=100 (B)	FEB.	292.3	0.6	5.9
FOOD AND BEVERAGE	1967=100 (B)	FEB.	279.0	0.8	1.7
HOUSING	1967=100 (B)	FEB.	317.2	1.1	8.6
APPAREL AND UPKEEP	1967=100 (B)	FEB.	208.3	1.0	2.4
TRANSPORTATION	1967=100 (B)	FEB.	277.1	-1.8	1.2
MEDICAL CARE	1967=100 (B)	FEB.	363.2	3.6	15.0

*ALL PERCENT CHANGES ARE FROM TWO MONTHS PREVIOUS.

SOURCE: BUREAU OF LABOR STATISTICS

TABLE V. EMPLOYMENT AND SALES DATA FOR KANSAS, STATE AND AREAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
KANSAS--STATEWIDE						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	1182.2	0.6	-1.4
EMPLOYED	TH.	(M)	MAR.	1106.2	1.2	-4.1
FARM	TH.	(M)	MAR.	54.1	9.1	-2.3
UNEMPLOYED	TH.	(M)	MAR.	76.0	-7.3	25.4
RATE*	%	(M)	MAR.	6.4	-0.6	1.4
RETAIL SALES	MIL.$	(M)	MAR.	1172.9	2.3	4.9
WICHITA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	216.2	1.0	-4.1
EMPLOYED	TH.	(M)	MAR.	198.8	1.5	-6.6
FARM	TH.	(M)	MAR.	2.2	10.0	0.
UNEMPLOYED	TH.	(M)	MAR.	17.4	-6.5	38.1
RATE*	%	(M)	MAR.	8.0	-0.7	2.4
RETAIL SALES	MIL.$	(M)	MAR.	235.9	1.4	-6.7
KANSAS PORTION OF KANSAS CITY SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	276.3	0.8	1.3
EMPLOYED	TH.	(M)	MAR.	261.5	1.2	0.7
FARM	TH.	(M)	MAR.	1.2	9.1	-7.7
UNEMPLOYED	TH.	(M)	MAR.	14.8	-5.1	13.0
RATE*	%	(M)	MAR.	5.4	-0.3	0.6
RETAIL SALES	MIL.$	(M)	MAR.	219.0	1.9	5.1
TOPEKA SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	94.0	0.1	-0.3
EMPLOYED	TH.	(M)	MAR.	88.1	0.9	-1.0
FARM	TH.	(M)	MAR.	1.6	6.7	0.
UNEMPLOYED	TH.	(M)	MAR.	5.9	-10.6	11.3
UNEMPLOYMENT RATE*	%	(M)	MAR.	6.3	-0.7	0.7
RETAIL SALES	MIL.$	(M)	MAR.	86.1	0.6	1.8
LAWRENCE SMSA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	33.8	0.3	-3.4
EMPLOYED	TH.	(M)	MAR.	32.3	0.6	-3.6
FARM	TH.	(M)	MAR.	0.7	16.7	0.
UNEMPLOYED	TH.	(M)	MAR.	1.5	-6.2	0.
RATE*	%	(M)	MAR.	4.4	-0.3	0.1
RETAIL SALES	MIL.$	(M)	MAR.	26.5	5.7	4.5
RILEY COUNTY--MANHATTAN AREA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	22.4	0.	4.5
EMPLOYED	TH.	(M)	MAR.	21.6	0.4	4.5
FARM	TH.	(M)	MAR.	0.9	9.1	-2.7
UNEMPLOYED	TH.	(M)	MAR.	0.8	-10.8	6.5
RATE*	%	(M)	MAR.	3.7	-0.4	0.1
RETAIL SALES	MIL.$	(M)	MAR.	17.5	0.2	3.6
RENO COUNTY--HUTCHINSON AREA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	30.2	0.3	-2.3
EMPLOYED	TH.	(M)	MAR.	27.8	0.7	-4.6
FARM	TH.	(M)	MAR.	1.1	6.7	-2.6
UNEMPLOYED	TH.	(M)	MAR.	2.4	-4.0	36.0
RATE*	%	(M)	MAR.	7.9	-0.3	2.2
RETAIL SALES	MIL.$	(M)	MAR.	31.3	0.3	-1.3
CRAWFORD COUNTY--PITTSBURG AREA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	16.5	1.0	-0.5
EMPLOYED	TH.	(M)	MAR.	15.3	1.7	-1.8
FARM	TH.	(M)	MAR.	0.7	7.4	0.7
UNEMPLOYED	TH.	(M)	MAR.	1.1	-8.1	7.6
RATE*	%	(M)	MAR.	6.8	-0.7	0.4
RETAIL SALES	MIL.$	(M)	MAR.	12.9	-0.8	0.8
LYON COUNTY--EMPORIA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	17.6	0.	-3.0
EMPLOYED	TH.	(M)	MAR.	16.6	0.4	-3.8
FARM	TH.	(M)	MAR.	0.7	7.7	-3.4
UNEMPLOYED	TH.	(M)	FEB.	1.1	4.6	15.9
RATE*	%	(M)	MAR.	5.8	-0.6	0.7
RETAIL SALES	MIL.$	(M)	MAR.	15.9	1.1	-0.8
SALINE COUNTY--SALINA AREA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	25.3	0.4	-4.2
EMPLOYED	TH.	(M)	MAR.	23.5	0.4	-5.0
FARM	TH.	(M)	MAR.	0.6	9.1	-4.0
UNEMPLOYED	TH.	(M)	MAR.	1.8	-3.8	4.7
RATE*	%	(M)	MAR.	7.0	-0.3	0.6
RETAIL SALES	MIL.$	(M)	MAR.	28.0	-2.8	-2.2
BARTON COUNTY--GREAT BEND AREA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	19.7	0.5	1.9
EMPLOYED	TH.	(M)	MAR.	18.6	0.6	-0.7
FARM	TH.	(M)	MAR.	0.8	10.3	-3.0
UNEMPLOYED	TH.	(M)	MAR.	1.1	-4.3	91.3
UNEMPLOYMENT RATE*	%	(M)	MAR.	5.6	-0.3	2.6
RETAIL SALES	MIL.$	(M)	MAR.	26.4	-2.9	-25.4
MONTGOMERY COUNTY--COFFEYVILLE AREA						
CIVILIAN LABOR FORCE	TH.	(M)	MAR.	19.8	0.	-8.2
EMPLOYED	TH.	(M)	MAR.	17.2	0.6	-15.6
FARM	TH.	(M)	MAR.	0.5	10.4	1.0
UNEMPLOYED	TH.	(M)	MAR.	2.6	-1.9	119.2
RATE*	%	(M)	MAR.	13.2	-0.3	7.5
RETAIL SALES	MIL.$	(M)	MAR.	16.9	-3.6	-11.2

*ALL RATE CHANGES INDICATE ABSOLUTE CHANGES INSTEAD OF PERCENT.

NOTE: ALL RETAIL SALES FIGURES ARE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: RESEARCH AND ANALYSIS SECTION
DIVISION OF STAFF SERVICES
KANSAS DEPARTMENT OF HUMAN RESOURCES
TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VI. KANSAS AGRICULTURAL INDICATORS

INDICATORS			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
PRICES RECEIVED						
ALL FARM PRODUCTS	1967=100	(M)	MAR.	141.0	0.	2.9
ALL CROPS	1967=100	(M)	MAR.	132.0	2.3	3.9
WHEAT	$/BU.	(M)	MAR.	3.7	2.2	-2.7
SORGHUM GRAIN	$/CWT.	(M)	MAR.	4.5	4.1	15.8
CORN	$/BU.	(M)	MAR.	2.9	2.1	13.0
SOYBEANS	$/BU.	(M)	MAR.	5.5	0.7	-4.0
ALL HAY	$/TON	(M)	MAR.	58.0	-4.9	5.5
LIVESTOCK AND PRODUCTS	1967=100	(M)	MAR.	147.0	-0.7	2.8
ALL BEEF CATTLE	$/CWT.	(M)	MAR.	61.7	0.2	3.0
STEERS AND HEIFERS	$/CWT.	(M)	MAR.	64.7	0.3	4.7
CALVES	$/CWT.	(M)	MAR.	68.0	0.4	8.5
HOGS	$/CWT.	(M)	MAR.	49.4	-8.3	-1.2
MILK		(M)	MAR.	14.2	-1.4	-0.7
PRICES PAID						
HOG CONC. (38%-42%)	$/CWT.	(M)	MAR.	14.3	0.	1.4
BEEF CATTLE CONC. (32%-36%)	$/CWT.	(M)	MAR.	11.4	-0.9	2.7
MILK/FEED PRICE RATIO		(M)	MAR.	1.6	5.3	6.0

SOURCES: FARM FINANCE, KCLRS
CROPS, KCLRS
LIVESTOCK ON FEED, KCLRS
BUREAU OF ECONOMIC ANALYSIS

TABLE VII. RETAIL SALES SUBJECT TO SALES TAX BY BUSINESS CLASSIFICATION*

BUSINESS CLASSIFICATION			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
APPAREL	MIL.$	(M)	MAR.	39.2	-3.0	10.0
AUTOMOTIVE	MIL.$	(M)	MAR.	174.9	-3.3	1.5
FOOD	MIL.$	(M)	MAR.	261.7	7.5	-4.0
FURNITURE	MIL.$	(M)	MAR.	46.3	-2.3	0.2
GENERAL MERCHANDISE	MIL.$	(M)	MAR.	181.5	-1.0	-2.3
LUMBER & BUILDING MATERIALS	MIL.$	(M)	MAR.	70.9	-10.2	-3.1
PROF. & PERSONAL SERVICE	MIL.$	(M)	MAR.	49.5	-3.3	2.8
PUBLIC UTILITIES	MIL.$	(M)	MAR.	63.7	23.3	9.9
UNCLASSIFIED	MIL.$	(M)	MAR.	102.4	2.7	-1.7
FARM AND GARDEN PRODUCTS	MIL.$	(M)	MAR.	1.0	-6.8	11.4
MANUFACTURING AND TRADING	MIL.$	(M)	MAR.	72.4	-5.4	-12.7
MISCELLANEOUS	MIL.$	(M)	MAR.	12.6	17.5	201.3
TOTAL	MIL.$	(M)	MAR.	1073.5	1.0	-1.0

*ALL FIGURES ARE THE MONTHLY AVERAGES FOR THE PRIOR THREE MONTHS.

SOURCES: TAX RESEARCH SECTION
KANSAS DEPARTMENT OF REVENUE

TABLE VIII. BANKING AND FINANCIAL ACTIVITY IN KANSAS

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
MEMBER COMMERCIAL BANKS						
STATEWIDE						
TOTAL LOANS	MIL.$	(M)	FEB.	4242.0	0.4	8.9
TOTAL DEPOSITS	MIL.$	(M)	FEB.	7493.0	44.5	12.3
DEMAND DEPOSITS	MIL.$	(M)	FEB.	1698.0	-10.6	-2.9
TIME AND SAVINGS	MIL.$	(M)	FEB.	5795.0	76.3	17.6
KANSAS CITY, KANSAS*						
TOTAL LOANS	MIL.$	(M)	FEB.	219.6	-1.3	10.3
REAL ESTATE	MIL.$	(M)	FEB.	25.2	1.7	16.7
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	FEB.	58.3	1.5	16.6
CONSUMER	MIL.$	(M)	FEB.	41.6	-3.3	-7.6
TOTAL DEPOSITS	MIL.$	(M)	FEB.	369.8	0.4v	13.1
DEMAND DEPOSITS	MIL.$	(M)	FEB.	92.9	-7.3	-2.2
TIME AND SAVINGS	MIL.$	(M)	FEB.	276.9	3.3	19.4

TABLE VIII. BANKING AND FINANCIAL ACTIVITY IN KANSAS, CONT.

AREA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
TOPEKA*						
TOTAL LOANS	MIL.$	(M)	FEB.	290.5	3.3	10.0
REAL ESTATE	MIL.$	(M)	FEB.	55.3	0.3	28.6
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	FEB.	146.3	7.0	6.0
CONSUMER	MIL.$	(M)	FEB.	47.8	-1.2	11.2
TOTAL DEPOSITS	MIL.$	(M)	FEB.	453.1	5.4	3.0
DEMAND DEPOSITS	MIL.$	(M)	FEB.	151.6	2.2	-7.0
TIME AND SAVINGS	MIL.$	(M)	FEB.	301.5	7.0	8.6
WICHITA*						
TOTAL LOANS	MIL.$	(M)	FEB.	850.8	0.8	11.6
REAL ESTATE	MIL.$	(M)	FEB.	118.8	2.5	8.4
COMMERCIAL & INDUSTRIAL	MIL.$	(M)	FEB.	390.4	0.7	15.2
CONSUMER	MIL.$	(M)	FEB.	229.1	-2.6	6.1
TOTAL DEPOSITS	MIL.$	(M)	FEB.	1400.5	1.7	16.8
DEMAND DEPOSITS	MIL.$	(M)	FEB.	464.2	-4.9	-4.2
TIME AND SAVINGS	MIL.$	(M)	FEB.	936.3	5.3	31.1
SAVINGS AND LOANS--STATEWIDE						
LOANS MADE	MIL.$	(M)	MAR.	102.6	50.0	116.5
NET GAIN IN SAVINGS**	MIL.$	(M)	MAR.	77.3	-44.5	69.0
SAVINGS AND LOANS--CITIES						
KANSAS CITY, KANSAS						
LOANS MADE	MIL.$	(M)	MAR.	20.8	-29.5	433.3
NET GAIN IN SAVINGS**	MIL.$	(M)	MAR.	18.9	-22.6	22.0
TOPEKA						
LOANS MADE	MIL.$	(M)	MAR.	19.4	32.9	373.2
NET GAIN IN SAVINGS**	MIL.$	(M)	MAR.	21.8	-7.9	23.2
WICHITA						
LOANS MADE	MIL.$	(M)	MAR.	26.8	83.6	145.9
NET GAIN IN SAVINGS**	MIL.$	(M)	MAR.	10.7	-14.8	5.5

*ONLY LARGE COMMERCIAL BANKS ARE INCLUDED.

**NUMBERS IN PERCENT CHANGE COLUMNS INDICATE ABSOLUTE CHANGE.

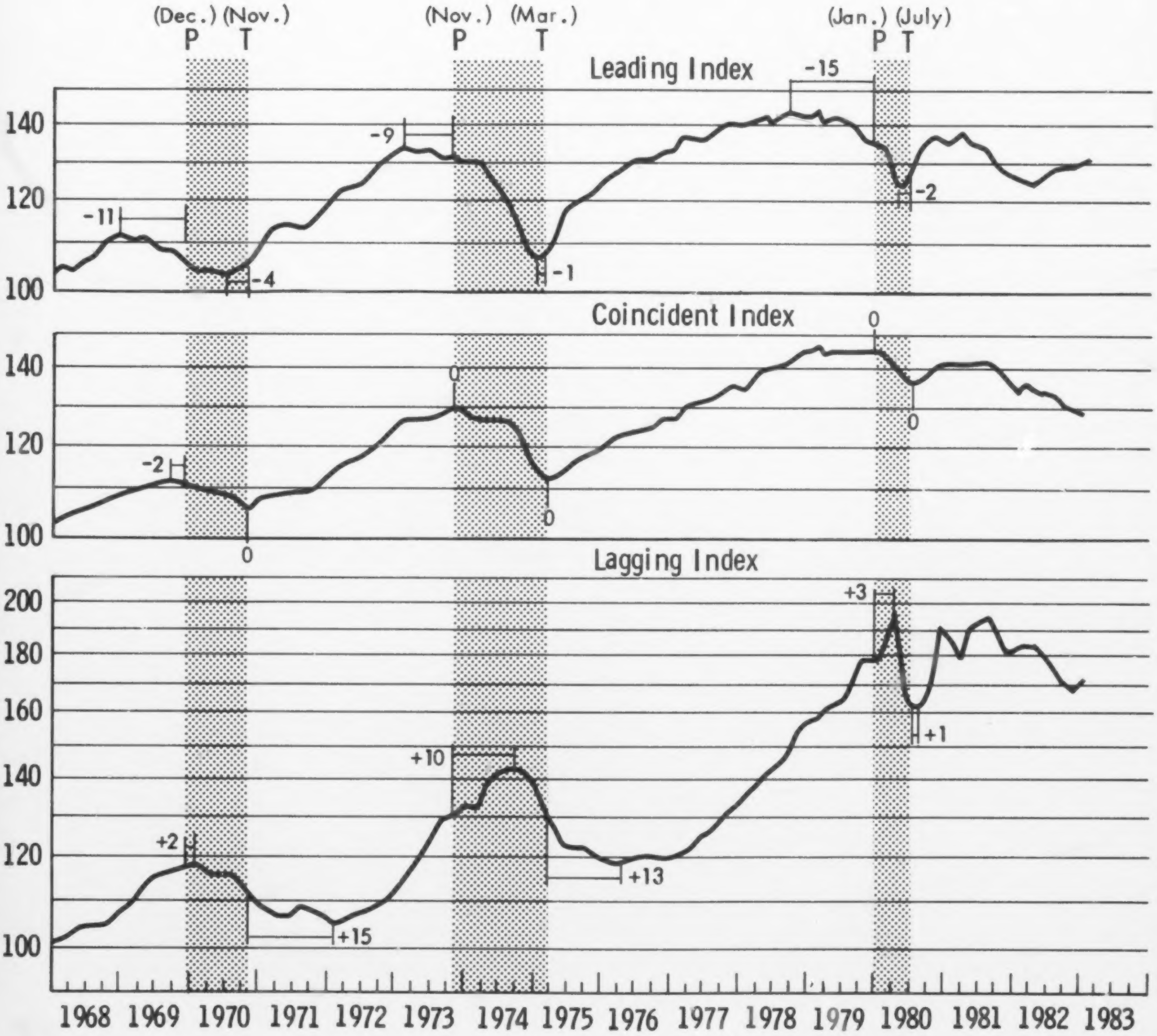
TABLE IX BANKING AND FINANCIAL ACTIVITY IN KANSAS

AREA AGGREGATED STATEWIDE DATA			LATEST DATE	LATEST PERIOD	% CHANGE	% CHANGE YEAR AGO
STATEWIDE						
TOTAL LOANS	MIL.$	(Q)	3rd	9,422.5	2.7	10.1
TOTAL DEPOSITS	MIL.$	(Q)	3rd	15,497.9	3.6	9.2
DEMAND DEPOSITS	MIL.$	(Q)	3rd	3,320.7	3.3	(-3.2)
TIME AND SAVINGS	MIL.$	(Q)	3rd	12,177.1	3.7	13.2
KANSAS CITY, KANSAS*						
TOTAL LOANS	MIL.$	(Q)	3rd	1,534.9	5.6	13.6
REAL ESTATE	MIL.$	(Q)	3rd	525.7	3.2	10.5
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	3rd	437.6	10.1	23.6
CONSUMER	MIL.$	(Q)	3rd	383.3	3.1	6.9
TOTAL DEPOSITS	MIL.$	(Q)	3rd	2,324.2	3.3	10.9
DEMAND DEPOSITS	MIL.$	(Q)	3rd	469.6	3.4	2.3
TIME AND SAVINGS	MIL.$	(Q)	3rd	1,854.6	3.3	13.4
TOPEKA						
TOTAL LOANS	MIL.$	(Q)	3rd	615.3	.5	8.2
REAL ESTATE	MIL.$	(Q)	3rd	138.1	1.1	1.2
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	3rd	242.5	1.9	12.3
CONSUMER	MIL.$	(Q)	3rd	125.8	5.3	(-2.6)
TOTAL DEPOSITS	MIL.$	(Q)	3rd	996.6	6.2	2.6
DEMAND DEPOSITS	MIL.$	(Q)	3rd	259.9	9.6	(-5.7)
TIME AND SAVINGS	MIL.$	(Q)	3rd	736.6	5.5	5.9
WICHITA*						
TOTAL LOANS	MIL.$	(Q)	3rd	1,524.3	.3	8.4
REAL ESTATE	MIL.$	(Q)	3rd	334.4	.3	3.8
COMMERCIAL & INDUSTRIAL	MIL.$	(Q)	3rd	654.4	(-1.6)	13.4
CONSUMER	MIL.$	(Q)	3rd	361.3	.6	(-1.5)
TOTAL DEPOSITS	MIL.$	(Q)	3rd	2,470.8	4.7	6.1
DEMAND DEPOSITS	MIL.$	(Q)	3rd	769.0	2.7	(-6.9)
TIME AND SAVINGS	MIL.$	(Q)	3rd	1,701.8	5.7	13.2

* This table includes data for all those commercial banks in Kansas required to report transactions to the Federal Reserve or the FDIC. It represents, therefore, a much more comprehensive, but less timely, compilation than that reported in Table VIII.

COMPOSITE INDEXES

1967 = 100



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The University of Kansas
Kansas Business Review
March, April-May, June 1983 Vol. 6 Nos. 4 and 5

Published bimonthly by the University
of Kansas, The Institute for Economic
and Business Research, Lawrence, Kansas 66045

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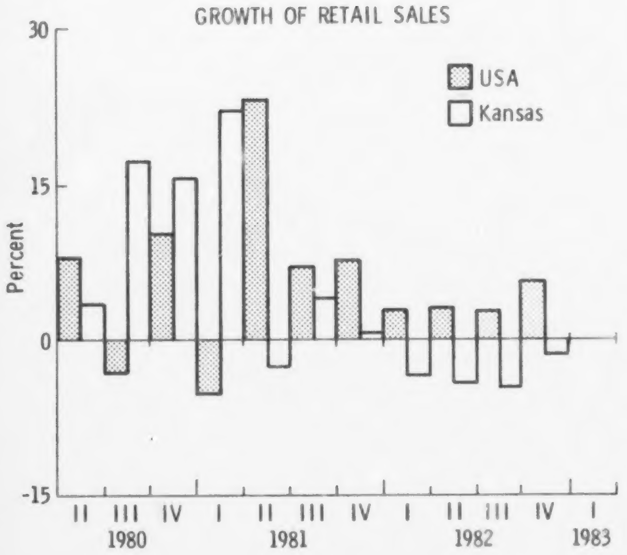
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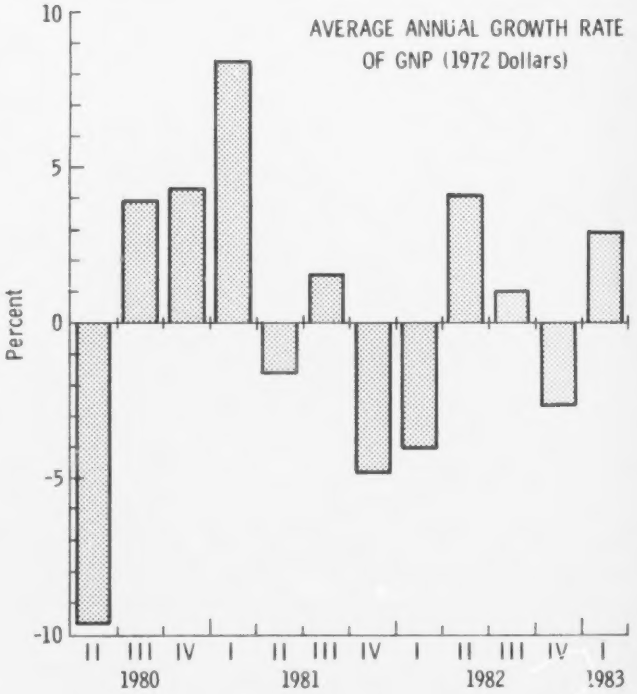
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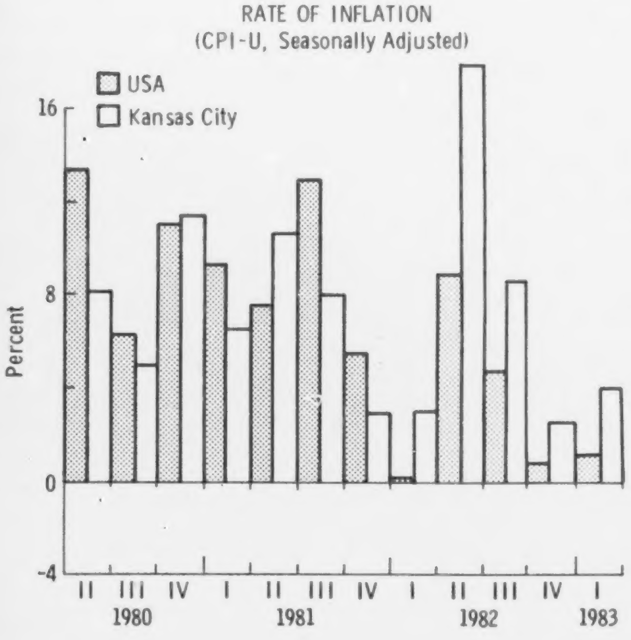
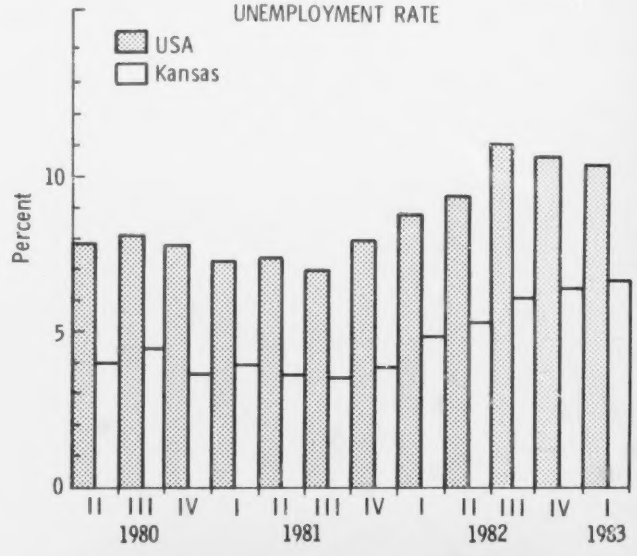

RATE OF INFLATION
(CPI-U, Seasonally Adjusted)


UNEMPLOYMENT RATE

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